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1 D McLean, American Pie.
Avenging Champawat: Adivasis and Tigers in the Age of Extinction

Regina Menachery Paulose**

Introduction

During the era of British colonization in India, a notorious “man-eating”2 tiger once lurked about. From 1900 to 1907, an Indian3 tigress named Champawat stalked and killed approximately 500 people.4 Although tigers “are animals which generally change direction at the first sign of a human,” at the beginning of the twentieth century, “a change so profound and upsetting to the natural order was occurring in Nepal and India as to cause one such tiger to not only lose its inborn fear of humans altogether but to begin hunting them...”5 Champawat was injured by a bullet which prevented her from hunting her natural prey. She was forced to survive in an environment that had been turned upside down by India’s colonial masters. In No Beast So Fierce, Dane Huckelbridge shares details about Champawat’s deadly reign and the powerful impact British colonialism specifically had on tigers, Adivasi6 peoples and the environment. Huckelbridge asserts, “if rural Indian populations had become helpless in the face of apex predators, it was largely because colonial policy had rendered them such.”7

The tigress was eventually killed by Jim Corbett, a European settler born in India, who later devoted his life to tiger conservation.8 However, other “man-eaters” -- injured by hunters, left without proper prey to hunt, and a shrinking habitat -- continued to plague the Indian landscape killing thousands of people.9 Yet even today the “tiger – people conflict” has not stopped.10 In the majority of cases, these interactions have led to rather

**Regina Paulose, International Criminal Law Attorney. Special thanks to Tina Thomas, Christine Sanon, and Paul Leach for their advice.
3 The Indian Tiger’s name was “rechristened” to the Royal Bengal Tiger in honor of the Prince of Wales, Edward VII. This article will use the term Indian Tiger. Mukun Belliappa, A Natural History of Colonialism, NEW ENGLAND REVIEW, (2015), http://www.nereview.com/vol-36-no-3-2015/mukund-belliappa/.
5 Id at 3.
6 Adivasi means “original inhabitants” and India uses the legal term “scheduled tribes” and avoids use of the term “indigenous.”
7 Huckelbridge, supra note 3, at 131.
8 See Gadhvi, Gheerawo, Walti, Jordania, and Quevedo de Oliveira, BEHIND JIM CORBETT’S STORIES: AN ANALYTICAL JOURNEY TO ‘CORBETT’S PLACES’ AND UNANSWERED QUESTIONS (2016).
9 Belliappa, supra note 2.
10 See The Guardian, More than 1,000 people killed in India as human and wildlife habitats collide, (August 1, 2017), https://www.theguardian.com/environment/2017/aug/01/over-1000-people-killed-
unpleasant deaths. Interestingly, public opinion in India is mixed on how to handle the offending tiger, with those who favor sparing the tiger’s life and others who favor its death.

This article was inspired by Huckelbridge’s book and invites the reader to reflect on the progress India has made since the departure of its colonial rulers and what more can be done to simultaneously protect both the rights of Adivasi people and to protect the Indian tigers.

I. Extinction in Context

India’s long held reverence for the tiger appeared lost once the British colonized India. The “divinity” and “necessity” of tigers has been a “tenet of faith” in India since ancient times. In the Mahabharata, an ancient Indian Hindu epic, references are made to the tiger. Within India there are many groups that pay homage to the tiger in various ways. “In Central India, the Baigas, or Tiger Clan, consider themselves the cat’s descendants. North of Mumbai, the Warli tribe erects wooden tiger statues for use in fertility rites…and donate part of the year’s harvest to the tiger as a symbol of life and regeneration.” A certain symbiosis existed between tigers and people. Indian people learned to live with the tiger and accommodate its behavior however they reasonably could. There are historical accounts of villages that adopted and fed tigers so that they would not harm people.

The rulers of India also held an affinity for the tiger. Tigers were considered royal property and were adopted as “powerful symbols” of Mughal rule. In the 16th century, Mughal Emperor Jala-us-Din Muhammad Akbar began a royal tradition of bagh shikar (tiger hunting) until the dynasty fell in 1857. However, the Mughal tradition had “minimal effect on tiger populations or the habitats in which tigers lived. Held at widely dispersed forests on a rotating schedule, and conducted primarily with bows and spears, these hunts were never intended to delete the tiger population or rid a region of...
predators.”\textsuperscript{18} The forests and tigers represented power for the rulers. Unfortunately, there would be a dramatic shift under British rule in India as the tiger became a “cliché of colonial life.”\textsuperscript{19}

When The East India Trading Company\textsuperscript{20} arrived in India, India had approximately a fifth of the world’s total population and “was producing about a quarter of global manufacturing…in many ways it was the world’s industrial powerhouse and the world’s leader in manufactured textiles.”\textsuperscript{21} India’s success changed in the hands of the British Empire, which “effectively turned the entirety of its foreign possessions into an engine of revenue, which meant exploitation of natural resources on a massive, multifaceted scale.”\textsuperscript{22} While this reflected the broader impact of colonialism, Britain’s exploitative practices created enormous challenges for the continued existence of the Adivasis and tigers.

\textit{a. Adivasis and Colonial Rule}

In medieval England, William the Conqueror introduced the “royal forest” model to “protect the deer for his own hunting” and these laws continued under Henry II.\textsuperscript{23} As long as the deer were protected and a profit could be made for the royal treasury, “all sorts of clearing” was allowed.\textsuperscript{24} Even during this time period the goal of protecting the royal forests was to “manage” the forest resources, as opposed to “total preservation.”\textsuperscript{25} England’s appetite for using forest resources continued to grow through successive kings and queens and, as a result, forest resources from colonial territories became precious commodities that helped to bloat the British economy.\textsuperscript{26}

The British sought control over Indian forests through a mix of physical (“fencing the forests”)\textsuperscript{27} and legal barriers. Severe restrictions on forest use were placed on

\textsuperscript{18} Huckelbridge, \textit{supra} note 3, at 96.
\textsuperscript{19} Belliappa, \textit{supra} note 2.
\textsuperscript{22} Huckelbridge, \textit{supra} note 3, at 112.
\textsuperscript{24} Id.
\textsuperscript{25} Id.

communities and those who once had “unrestricted” access. The physical separation of Adivasi communities from their native areas was also a critical step in executing Britain’s green imperialist agenda and bringing the populations “under control” of British bureaucracy.

The British created the Forest Department in India, which allowed for the complete use and regulation of the forest. The Forest Department was given power through laws such as the Forest Act of 1865, later amended in 1878, to remove “ambiguities” about property rights. The idea of conservation was integrated into these exclusions. For instance, the 1878 Act “aided in taking away all preexisting rights of communities and tribes living in those forests because the latter were believed to be leading lifestyles that were intrinsically hostile to the natural environment.” False narratives were spread regarding forest dwellers and how they had unsustainable practices, thereby necessitating British intervention in saving the environment from havoc. To counteract this, the British depicted themselves as a “generous state” by granting “concessions” to the communities.

The British also utilized the criminal legal regime to control forest areas and Adivasis. There was a general law, the Criminal Tribes Act 1871, which allowed for a “tribe, gang, or class” to be labeled “criminal.” This law took aim at those tribes who would be considered nomadic by modern standards. It also targeted people who were economically disadvantaged. Further, the Forest Acts penalized people in nearby villages who utilized the forests. “The most serious problem confronted by the state was how to reconcile the contradictory claims of forest conservation and management, on the one hand, and, on the other, the unchecked forest use for local needs that was causing problems of law and order and other disturbances.”

The British limited the freedoms and culture of forest dwellers in other ways. Forced labor was used throughout the forests as an “administrative convenience.” Additionally, poor tribes “were denied precious and scarce sources of protein and other

28 Id.
30 Das, supra note 26.
31 Id.
33 Id.
36 Id.
37 Id at 163.
foods - not to mention the interruption or extinction of cultural customs associated with the forest, such as ritual hunting, certain interpretations of the agricultural cycle, etc.”

There are historical examples of Adivasi people being forcibly removed throughout India from their lands which gave the British a complete monopoly over resources. There are some instances where the direct consequence of such actions led to violent uprisings against British authorities.

Forests “were integrated into the commercial circuit of timber production through improved transportation networks. More importantly, commercially valuable varieties of trees were cultivated at the expense of other forest resources that may have been more useful for the inhabitants of the forest.” Through the Forest Act of 1865 “pressure” was put on environmental resources so that the railway could be fueled by “the natural jungles.” Britain’s consumption of firewood and charcoal caused the forest cover to “shrink.” Forest shrinkage had a direct negative impact on the tiger’s natural habitat.

b. Colonial Rule and Tigers

Dane Huckelbridge reflects it was a “[f]ull century of disastrous ecological management in the Indian subcontinent that drove [the tiger] out of the wild forests and grasslands it should have called home.” This forced the tiger to search for food outside of its habitat and eventually created uncomfortable human tiger interactions. Tigers then turned into a problematic, but opportunistic, issue for the British. “The existence of tigers in the wild was viewed, both symbolically and literally, as a direct challenge to British hegemony. Overcoming that challenge was an act of conquest – of colonization – and it was very much encouraged by the colonial government.” The solution to this problem was the creation of the elite industry of tiger hunting, in essence an expansion of bagh shikar. Tiger hunting enforced British paternalism. It became another way of “protecting” the Indian population, in this case from the dangers the tiger posed. This was depicted in British cultural magazines during that time period. Magazine contributors portrayed the tiger as “skulk[ing] in thick bushes or attacking lone individuals…” and sometimes the tiger was even portrayed as deceitful.

Financial rewards were introduced to hunters – including Indians – who were successful at exterminating the species. Money was given for various parts of the tiger, but more

38 Swami, supra note 31.
39 Verghese, supra note 28.
40 Id.
41 Swami, supra note 31, at 120.
42 Id at 119.
44 Huckelbridge, supra note 3, at 4 and 33.
45 Id at 104.
money was paid out for tiger skins.\textsuperscript{47} The formulation and execution of “vermin eradication” policies had a horrendous impact on the tiger population. “During 1879 – 88 alone, the colonial government’s bounty system had funded the killing of 16,573 tigers.”\textsuperscript{48} Ironically, the British needed another system to prevent the rapid decimation of the tiger as they feared “there would be no game left for hunting.”\textsuperscript{49} Therefore, a permit system was introduced and required for hunting. “Permits were rarely, if ever, granted to Indians and not even automatically to all Europeans; this system not only deepened racial divisions between Britons and Indians but also placed considerable power over hunting in India after 1878 in the hands of Forest Department officials.”\textsuperscript{50} It is reasonable to conclude that British hunting policies and maybe even poaching\textsuperscript{51} contributed to the rapid decline of the Indian tiger and creation of “man-eaters” in India. It was not until the leadership of Indira Gandhi that things would take a positive turn for the Indian tiger species.

II. Recuperation and Repetition

Once the British departed, India began evaluating its laws. In a report issued by the Law Commission of India in 1957, the Commission noted that as the ties between India and the United Kingdom were removed, “…in the fitness of things, that the entire legal Code of India should be purely Indian…” and “after having attained fully sovereign status, India should have laws of her own…”\textsuperscript{52} Throughout subsequent years India has continued to repeal laws that are considered to be colonial “legal relics.”\textsuperscript{53} Yet critics argue that the national government’s actions merely “give the perception they are bringing change.”\textsuperscript{54}

With specific regard to Adivasis and tigers, legal relics from the past still exist. India's two frameworks, one which purports to protect the rights of Adivasis and the other which protects the tigers, are distinct and separate.

a. Forests and Forest Dwellers

Until 1935 Britain exercised control over tribal areas. After a series of successive acts, the British passed the 1935 Government of India Act which created an All India Federation. Control over tribal areas, however, was still under the realm of the King, who was able to exercise rights by “treaty, grant, usage, sufferance or otherwise in and in relation to

\textsuperscript{47} Id.
\textsuperscript{48} Mandala, supra note 45.
\textsuperscript{50} Sramek, supra note 15.
\textsuperscript{54} Id.
tribal areas.” 55 After Indian independence, autonomy over these lands did not revert back to Adivasis. The 1952 National Forest Policy stated that “communities near forests should not override the national interests, that in no event can the forest dwellers use the forest wealth at the cost of wider national interests, and that relinquishment of forest land for agriculture should be permitted only in very exceptional and essential cases.” 56 This extension of British colonial policy translated to a basic formula: profit before people. Years later, the 1980 Forest Conservation Act made it mandatory for the Government of India to approve any state decision to divert land for “non-forestry” purpose. 57 In 1988 India launched the National Forest Policy (NFP). The objectives of this policy were to work with “local stakeholders” and to conserve “natural heritage and genetic resources.” 58 Some critics claim that the 1988 NFP is in need of an update. It does not have a clear definition of “forest” and it does not provide a central management structure of wild and uninhabited forest areas. 59

In 2018 India attempted to create a new draft NFP, which addressed issues such as deforestation, climate change, and forest health. 60 The problem with the new draft was that it did not incorporate the voices of those who already lived in and depended on the forest. Further, the 2006 Forest Rights Act (FRA) was only mentioned as part of other laws that must be harmonized with the potential new policy. 61 In 2019 another draft NFP was prepared and withdrawn later that year. 62 Many have argued that the new versions of the NFP do away with the best parts of the 1988 NFP which balances the ecological interests of preserving the forest and the rights of forest dwellers. 63

The 1988 NFP was the legislation that paved the way for the Forest Rights Act of 2006. 64 The FRA was passed in an effort to rectify colonial abuses but instead has caused more damage as a result of poor implementation and disagreements between stakeholders. The FRA “makes provisions for recognizing and giving the forest rights to forest-dwelling

59 Mayank Aggarwal, India’s missing a clear forest policy and its jungle dwellers are the worst off, Quartz India, (January 13, 2020), https://qz.com/india/1783965/indias-missing-forest-policy-is-hurting-tribals-the-most/.
61 Id.
62 Aggarwal, supra note 59.
63 Warrier, supra note 60.
64 Id.
scheduled tribes and other traditional communities residing in such forests for generations but whose rights could not be recorded.” The grant of rights is not automatic and each person who claims entitlement to these rights must prove so under the FRA. Indian state governments have been slow to implement the FRA. Other laws and regulations passed by the national government have diluted any potential achievements the FRA could make. One such law is the Wildlife Protection Act (WPA) of 1972.

The WPA allows for state governments to declare sanctuaries and wildlife habitats as they consider of “adequate” significance for the “purpose of protecting, propagating or developing wildlife or its environment.” In order to declare an area a sanctuary there must be notice which shall have the geographical limits of the area and the “area shall be sanctuary on and from such date as may be specified in the notification.” The FRA incorporates the WPA and appears to give deference to decisions made under the WPA to protect wildlife over the rights of Adivasi peoples. This is a critical issue as the FRA creates a hierarchy between Adivasis and tigers. It is not clear whether this hierarchy was intended, but this deference to the WPA essentially has kept colonial frameworks over the forests in place, thereby violating the human rights of Adivasi’s and causing retribution against the tiger, as discussed below.

Implementation of the FRA has had a rocky start. Adivasis who lived in the forests report they were unofficially threatened and harassed with eviction and made to leave from demarcated areas. In 2011, a Clarification was issued by the Ministry of the Environment which reiterated that notice must be given when such action is taken. Further, people must be given just compensation and must consent to relocation if they are moved from designated areas. Sadly, this Clarification from the authorities has not made a difference. A study that was completed 10 years after the implementation of the FRA supports the claims made by the Adivasis. In Odisha, which claims to “be one of the most advanced states in implementing the FRA,” villages within the tiger reserves that

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68 The Wildlife Protection Act 1972, Chapter IV, Section 18.

69 Id., Section 26A.


were awarded rights under FRA have been relocated without just compensation and in complete contradiction of the FRA. 74

A report published by Reuters points out that in 2017 “…data collected by the advocacy group Housing and Land Rights Network showed the government destroyed at least six homes and forcibly evicted 30 people each hour in India.”75 In Assam that same year a “posse of 1,500 policemen” evicted 700 families in Amchang Wildlife Sanctuary by “razing houses, demolishing schools and places of worship, and injuring women and children in the process.”76

In 2017 the National Tiger Conservation Authority (NTCA) notified 17 state governments “no rights shall be conferred in Critical Tiger Habitats.”77 The following year, the National Commission for Scheduled Tribes asked the Ministry of the Environment to ensure that its policies on tiger conservation do not threaten the rights of Adivasi peoples.78 In 2019 the Supreme Court of India waded into the brewing battle79 and ordered states to fulfill their obligations and evict those who encroached on forest lands.80 Some scholars suggest the activist role the Supreme Court of India has played in environmental conservation has created more problems, as this decision illustrates.81 The FRA has exacerbated the abuses it was supposed to address82 and has created “conservation refugees.”83

74 Id. at 22.
78 Rina Chandran, Indian officials order stop to eviction of tribal people from tiger reserves, Reuters, (February 27, 2018), https://www.reuters.com/article/us-india-rights-wildlife/indian-officials-order-stop-to-eviction-of-tribal-people-from-tiger-reserves-idUSKCN1GB14Y.
79 Whether the decision is good or not remains to be seen. See Ramki Sreenivasan, The Recent Supreme Court Order on Forest Rights Act (FRA) Does not Affect Genuine Claimants, Conservation India, (August 5, 2019), https://www.conservationindia.org/articles/fra-sc.
81 “For example, in 2000 the Supreme Court of India restrained state governments from removing deadwood from PAs…The Supreme Court has continued to assume unprecedented powers and this has further complicated the already complex forestry laws in India.” Archi Rastogi, et al. Saving the Superstar: A Review of social factors affecting tiger conservation in India, JOURNAL OF ENVIRONMENTAL MANAGEMENT, 331-332, February 15, 2012.
83 Nitin Rai, India’s efforts to save its tigers have turned some Adivasi communities into conservation refugees, Scroll, (August 12, 2019), https://scroll.in/article/933391/indias-efforts-to-save-its-tigers-have-turned-some-adivasi-communities-into-conservation-refugees.
Forced evictions of this magnitude violate customary international human rights norms and international laws that India has ratified. Given the unique cultural ties that indigenous groups have to their lands, the United Nations Declaration on the Rights of Indigenous Peoples (UN DRIP) in Article 8 provides that redress must be provided for lands which are taken. Further, UN DRIP Article 10 prohibits forcible removal from lands and territories and any relocation must involve “free, prior, and informed consent” of those concerned.84 These articles and similar ones are enshrined within the International Convention on the Elimination of All Forms of Racial Discrimination (Article 5, 6); International Covenant on Civil and Political Rights (Article 1, 2, 12); International Covenant on Economic, Social, and Cultural Rights (Articles 11, 15); Convention on the Elimination of all Forms of Discrimination against Women (Article 14); and the Convention on the Rights of the Child (Articles 16, 29, 31).

Courts in India have reinforced international human rights law on forced evictions in their decisions. In 2019 a division of the High Court of Delhi ruled in Ajay Maken & Ors. v. Union of India that forced evictions of people who reside in city slums contravened the law. The Court noted that India was obliged under the 1993 Protection of Human Rights Act, which recognizes the International Covenant on Economic, Social, and Cultural Rights that India ratified in 1976.85 to ensure legal safeguards for those who are evicted are consistent with the international covenant.86

It is important to emphasize that Adivasis have unique ties to their lands and therefore, state sponsored policies of forced evictions will inevitably lead to the destruction of these tribal groups. Father Ashok Kujur emphasizes the critical relationship for Adivasi people and their lands as follows:

“The totality of the Adivasis’ life and values is rooted in three life-giving entities: Jal-Jangal- Jameen, meaning water, forest and land. Without these essentials, there is no tribal identity. To save the identity of the Adivasis, all these elements need to be saved. The Adivasis of northern India say, Jaan Denge Jamin Nahin Denge, meaning, “we will give our life, but we will not give our land.”87

Adivasi communities within India represent a vulnerable group of people. It is evident from history and even today that they have been “sacrificed in the great nation-building

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86 Id at para 63.

project called India. These and other similar communities have been displaced, often brutally, from their ancestral forests, fields, and livelihoods to make way for one big project after another – for dams, mines, urban expansion, and infrastructure projects. When they have resisted, and there are innumerable cases of this, they have been physically assaulted and sometimes killed by forces of the state that are meant to protect them.”

While some counter that forced relocation of tribal communities has become harder to do, it is alleged that officials find other ways such as “putting a livelihood squeeze on the people who live within these reserves.”

While the goals of protecting Adivasi communities need significant alignment between theory and practice, the situation concerning the tigers shows somewhat of a brighter side, yet the tigers also face dark challenges.

b. Tigers: return of the cultural icon

From 1947 to 1950, the new political autonomy of India did not change the attitude towards the tiger. “Shikar packages” were sold which allowed affluent people to continue to kill tigers for sport.

It was not until 1968 the government enacted a ban on tiger hunting, due to the continued decline of the tiger population. In 1970 the national government created an absolute prohibition on tiger skins and products derived from tiger parts given the amount of international attention tiger extinction rates received.

Shikar outfitters and other sport hunters filed suit against the national government. In 1971, the Supreme Court of India ruled in favor of the national government, validating the prohibition.

The Supreme Court noted in its ruling that the 1969 International Union for Conservation of Nature and Natural Resources (IUCN) found the major cause of tiger disappearances was due to hunting. The Supreme Court highlighted that IUCN’s papers “showed that prior to 1947 there was hardly any Shikar Company like the petitioners organizing tiger hunts, and that thereafter 27 such Companies came into existence all over the country.”

Given India’s colonial environmental history this claim by ICUN is extremely questionable. Further, the Supreme Court did not examine India’s environmental history and the impact colonialism had on Indian tigers. Awareness of historical issues could have informed subsequent national action and legislation in order to create an appropriate balance between Adivasi rights and tigers.

Nevertheless, Prime Minister Indira Gandhi took advantage of the pro-tiger momentum and passed ambitious protection plans. In April 1973 “Project Tiger” was launched,

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89 Rai, supra note 83.
91 Id.
92 Indian Shikar Outfitters ... vs Union of India and Ors. ILR 1971 Delhi 178, para 5, (February 9, 1971).
93 Id. at para 23.
which created tiger reserves and was the world’s largest conservation project.\(^94\) “Tiger reserves follow a core/buffer strategy, where the core areas have the legal status of a National Park or a sanctuary, whereas the buffer areas are managed as multiple use areas. Project Tiger aim[ed] to foster an exclusive tiger agenda in the core areas of tiger reserves, with an inclusive people oriented agenda in the buffer.”\(^95\) This strategy contains elements of rewilding theory which has failed to protect the Indian tiger, as illustrated later in this article.

The importance and return of the tiger to India’s cultural heritage cannot be overstated. As the Morichjhapani incident in the late 1970’s proves:

“In the late 1970s hundreds of Bengali refugees (who came from present-day Bangladesh) were given shelter in Morichjhapani, a forested island in the Sundarbans. But when tigers started attacking and killing people, the government authorities later forcibly evicted the refugees, saying that they had violated forest laws that actually enshrined greater protection for Royal Bengal tigers. The Morichjhapani experience aroused refugees’ resentment at the ill-treatment they received from the government whom they perceived as according far more resources to the tiger.”\(^96\)

The current authority for Project Tiger is the NTCA.\(^97\) The NTCA supervises, coordinates, and performs other functions as outlined in the WPA. In addition it promotes the survival of the Indian tiger and (supposedly) works with the tribal populations. As of 2019, the NTCA reported that there are 50 tiger reserves. In addition, the numbers of tigers in each area shows a steady increase in almost every area where a reserve exists.\(^98\) Since 1973, India has been congratulated for its steady success in increasing the tiger population. While some of its success, such as that in Sariska Tiger Reserve,\(^99\) has appeared to be short-lived, Prime Minister Modi has stated that India is “one of the biggest and most secure habitats of the tiger.”\(^100\) As of 2019, India reported 2,967 wild tigers and estimated

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\(^95\) Id.

\(^96\) Mandala, *supra* note 45, at 20-21.

\(^97\) National Tiger Conservation Authority/ Project Tiger, *Background*, https://projecttiger.nic.in/content/107_1_Background.aspx (accessed on November 20, 2019).


“over 75 percent of the world’s tiger population now resides in the country.” 101 There are some that question whether the data representing the increase is accurate.102

The single largest threat to the Indian tiger appears to be poaching. Recently, India’s Wildlife Crime Control Bureau reported that between 2008 and 2018, 384 tigers were killed by poachers and at the same time 961 people were arrested for poaching.103 Worldwide, the tiger population has been dwindling due to wildlife crime. Tiger parts, including tiger blood,104 have become a valuable commodity in the illegal market. Tiger parts are claimed to have medicinal value: “whiskers quell toothaches, meat cures malaria, fat stops vomiting, blood strengthens willpower, noses sooth children’s epilepsy, teeth purge sores from man’s penis, eyeballs and bile prevent convulsions, and penises banish impotence and promote longevity.”105 India has attempted to stem the tide of tiger poaching, but more needs to be done.106

The WPA lays out what constitutes crimes against wildlife. One of the biggest goals of the WPA is to stop poaching.107 However, there appear to be issues with the WPA that need to be addressed. In a recent study, researchers concluded that wildlife laws are not uniformly implemented throughout India.108 Researchers also found prosecutorial and judicial leniency towards those who commit wildlife crimes.109 The lack of uniformity among states and prosecutorial challenges are not unique to India. The international community must also begin to consider the framework in which green crimes or environmental crimes can be prosecuted, given their transnational nature.110 The framework can incorporate existing conventions such as the United Nations Convention against Corruption and the United Nations Convention against Transnational Organized Crime.

The Supreme Court of India emphasized the protection of wildlife within the Indian Constitution in the T.N. Godavarman Thirumulpad vs Union of India & Ors judgment:

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101 Id.
104 Tiger bone wine is considered a “cure all” tonic. Rachel Love Nuwer, POACHED 296 (2018).
105 Id at 295.
106 “India – which currently holds about half of the world’s remaining tigers – began intercepting hundreds of pounds of tiger bones being smuggled into China” and other countries within Asia “raked in tiger bones by the tons in the 1990s.” Id. at 297.
109 Id.
“Natural resources are the assets of entire nation. It is the obligation of all concerned including Union Government and State Governments to conserve and not waste these resources. Article 48A of the Constitution of India requires the State shall endeavour to protect and improve the environment and to safeguard the forest and wild life of the country. Under Article 51A, it is the duty of every citizen to protect and improve the natural environment including forest, lakes, rivers and wild-life and to have compassion for living creatures.”

Some of the WPA objectives include prohibiting hunting without a license, establishing protected areas, and protecting and managing wildlife habitats. The WPA has gone through many cosmetic changes as it was amended in 1982, 1986, 1991, 1993, 2002, and 2006. There is an ongoing effort to revamp the WPA in order to bring it in line with other international treaties and increase further penalties in response to poaching. However, it is clear that the WPA needs to be brought in line with the NFP and FRA. These laws need to incorporate the role of tribal communities in wildlife protection and forestry management. In addition these laws need to also protect the cultural heritage of Adivasi people given their deep connection to the forests.

Despite these challenges, tiger protection continues to be elevated on a national level and the tiger remains a cultural heritage jewel of India. As the final part of this article illustrates, even with all the laws and protections for tigers in India, without any sincere and monumental change to Adivasi rights the outlook for the tiger looks bleak.

III. The Road to Holistic Solutions

Given the tiger’s importance in India, it is certain that the government and related authorities will continue their vigilance in protecting this species. However, the government’s plans have been fragmented and shortsighted. These plans lack an appropriate and unified framework. One scholar echoes these sentiments:

“The Indian society faces a dilemma in finding the appropriate balance between the divergent uses of its natural resources. The issue of tiger conservation is particularly intense ... how India meets the challenges of conserving its tigers will have valuable lessons for many other sustainable development challenges in various contexts.”

What approach could potentially resolve the dilemmas that have been posed in the status quo? Not too long ago India attempted one contemporary response – rewilding.

a. Rewilding

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111 T.N. Godavarman Thirumulpad vs Union Of India & Ors, Writ Petition (civil) 202 of 1995, (September 26, 2005).
113 Vasan, supra note 93.
114 Rastogi, supra note 81, at 337.
Rewilding is largely defined as restoring the wilderness based on the regulatory roles of large predators. Three features, simplified as the three C’s, characterize rewilding: carnivores, core, and connectivity. This particular theory is premised on the idea that ecosystems are maintained by top predators which in turn require “large cores of protected landscapes for secure foraging, seasonal movement, and other needs; they justify bigness.”

The first element, “carnivore”, emphasizes the necessity of protecting apex predators as they are “generally considered bellwethers of the overall health of the environment.” The second element, “core”, is loosely defined as “continental in scale, preserving entire ecosystems” but they are to be “expanded and strictly protected, and their natural fire and flood regimes restored where possible.” Under rewilding theory, India has 50 tiger reserves all of which would be considered core areas. However, the problem is that these core areas do not allow the tigers to disperse and there is a mix of human activity that takes place within the core areas. The final element, “connectivity,” bridges core areas to prevent and stop fragmentation. Fragmentation is best viewed as a patch of land, usually identified for a specific purpose. British forest management policies and now India’s policies on tiger reserve management have continued fragmentation. As researchers stated:

“Being a solitary and long-ranging animal, factors impeding tiger movement will have long-term consequences on reproductive fitness and population survival. Tiger movement is highly affected by landscape features, and dispersing tigers likely move through rough terrain along forested ridges, avoiding non-forest areas with high human footprint, while tiger populations are largest in locations centered on large protected areas with extensive forest cover within and surrounding them. These results have important implications for tiger conservation and management and can be used to develop empirically supported prioritization of core areas and corridors.”

Tiger movement and connectivity between core areas allows for the “exchange of gene-flow” which is also “critical for increasing ecosystem resilience, their ability to mitigate environmental risks, e.g. by supporting ecosystem-based adaptation to climate change.” Therefore creating corridors between the core areas for the tigers would allow for Indian tigers to pass through to other areas in India, creating an opportunity for it to

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116 Id.
117 Hucklebridge, *supra* note 3, at 5.
increase in its kin and ending fragmentation. Finally, the connectivity of core areas using corridors may in fact cause a complete decline in the number of people-tiger conflicts since the tiger would have more access to diverse resources to survive.

Supposedly a rewilding model was applied in the Sariska Tiger Reserve and failed. Sariska had numerous problems. First, appropriate studies were not conducted concerning tiger mobility and how much core area the tigers would need. Second, the core area itself was not isolated from human interaction. Between 2003 and 2005, India calculated an increase in the number of pilgrims for religious festivals and cars that entered the reserve. Additionally, eco-tourism in the reserves creates more human traffic. Third, the area itself was unable to repopulate, which caused it to be devoid of other animals (herbivores) the tiger would have depended on.

Other notable problems in Sariska, according to the Tiger Task Force (specifically set up as a result of the loss of tigers in Sariska), included poachers who allegedly worked with local villagers to kill the tigers for its parts. In fact, the Tiger Task Force reported that “there is a deep hatred for the tiger among local people” due to the relocation plans that were announced. The pastoralists in the area “blame the sanctuary for everything – their lack of livelihood, inadequate development infrastructure in their villages, and most of all persistent harassment.” Ironically, between 2003 and 2005 the Sariska Reserve earned estimated 28-53 lakh rupees per year which was “collected by park authorities and deposited with the state government.” There is no indication that any of these profits were shared with local communities. Another problem that was identified by the Tiger Task Force was the inaccurate reporting of the number of tigers that may have actually been in the reserve.

India is rectifying where it went wrong in Sariska. At the end of 2019, the Indian government is considering conservation plans which “include mandatory inclusion of safe passages for tigers in all infrastructure projects.” However, India has shown it can attempt different solutions but not in a holistic manner. As highlighted by the Legal Initiative for Forest and Environment, the impact of development projects are not considered on forests and wildlife, despite the alternatives. Anecdotally, India recently

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122 *Id.*

123 Government of India Tiger Task Force, *Joining the Dots*, 14 (2005), [https://projecttiger.nic.in/WriteReadData/PublicationFile/Joning%20The%20Dots.pdf](https://projecttiger.nic.in/WriteReadData/PublicationFile/Joning%20The%20Dots.pdf)

124 *Id.*

125 *Id.* at 15.

126 *Id.* at 14.

127 *Id.* at 15.


gave permission to Bear Grylls to shoot two episodes for his Discovery Channel show in Bandipur Tiger Reserve in an area which is deemed strictly off limits to people.\textsuperscript{130}

Rewilding is not going to work given the current priorities, legal regime, and development plans in India. Others do not like rewilding because of the historical and personal reasons it invokes.\textsuperscript{131} A more integrated framework where tribal communities lead the strategy to save the tiger is necessary to reverse extinction trends.\textsuperscript{132}

\textit{b. Integrating Adivasi Rights and Wildlife Protection}

The Soliga are forest dwellers who possess in-depth knowledge regarding the forests and tigers.\textsuperscript{133} The Soliga also worship the tiger as a deity.\textsuperscript{134} In 1974, the Soliga tribe was evicted from their native lands (BR Hills) in Karnataka state, in an effort by the state to protect wildlife. Their lands were declared a sanctuary. This action was done under the legal umbrella of the WPA. In 2006 under the FRA, forest officials restricted “access and collection of non-timber forest produce.”\textsuperscript{135} Then, in 2011, the BR Hills were declared a tiger reserve. The Soliga challenged the decision through litigation. A court ruled in favor of the Soliga, securing their rights to their habitat and non-timber collection. After the 2011 decision, the BR Hills became the first tiger reserve where tribal people could come back home to stay.\textsuperscript{136} Since the success of the Soliga litigation, the tiger population in the BR Hills has “increased rapidly.”\textsuperscript{137}

\begin{itemize}
\item\textsuperscript{130} Rohini Swamy, \textit{Why conservationists are upset with Rajinikanth, Akshay Kumar & Bear Grylls of Man vs. Wild}, The Print, (January 30, 2020), \url{https://theprint.in/india/why-conservationists-are-upset-with-rajinikanth-akshay-kumar-bear-grylls-of-man-vs-wild/356724/}.
\item\textsuperscript{131} Kulbhushansingh Suryawanshi, \textit{The last tiger of Ajanta}, Mongabay, (April 10, 2020), \url{https://india.mongabay.com/2020/04/commentary-the-last-tiger-of-ajanta/}.
\item\textsuperscript{132} This article was published during the COVID 19 pandemic. In April 2020, the Indian government focused on how to prevent tigers from getting COVID 19, and many said this focus was misplaced because of other external factors that could jeopardize the tiger’s existence – which can be rectified through a holistic framework. Gloria Dickie, \textit{India sees Coronavirus Threat to Fragile Population: Tigers}, New York Times, (April 24, 2020), \url{https://www.nytimes.com/2020/04/22/science/india-tigers-coronavirus.html}.
\item\textsuperscript{133} See Aditi Patel, \textit{Meet the Soliga Tribe, India’s Natural Botanists}, Youth Ki Awaaz, (September 6, 2019), \url{https://www.youthkiawaaz.com/2019/09/meet-the-soliga-tribe-indias-natural-botanists/}.
\item See also Michael Benanav, \textit{Can Tribes and Tigers Coexist in India’s Nature Reserves?}, SIERRA, (June 15, 2017), \url{https://www.sierraclub.org/sierra/2017-4-july-august/feature/can-tribes-and-tigers-coexist-indias-nature-reserves}.
\item\textsuperscript{134} DTE, \textit{Tiger population doubles after tribals allowed to coexist in tiger reserve}, (December 11, 2015), \url{https://www.downtoearth.org.in/news/wildlife-biodiversity/tiger-population-doubles-in-reserve-that-allowed-tribals-to-stay-52093}.
\item\textsuperscript{135} Amoolya Rajappa, \textit{How a tribe in Karnataka fought and won a legal battle to stay in a tiger reserve}, Scroll India, (October 5, 2018), \url{https://scroll.in/article/896580/how-a-tribe-in-karnataka-fought-and-won-a-legal-battle-to-stay-in-a-tiger-reserve}.
\item\textsuperscript{137} \textit{Id}.
\end{itemize}
The correlation between the presence of Adivasi groups and the increase in tiger populations is more than coincidence. Experts within the UN Office of the High Commissioner for Human Rights noted:

“[y]et again research shows that the presence of indigenous peoples actually improves tiger populations. For generations, India’s tribal peoples have lived in harmony with the country’s wildlife, protecting and managing vital natural resources. It is because of their sustainable stewardship that India still has forests worth conserving. To truly protect wildlife, recognising the rights of forest guardians would be a far more effective strategy than rendering them homeless…”

Indigenous communities within India depend on forest areas where the tigers are present. Therefore, a community-based approach appears to be an appropriate solution. One successful method is the conservancy model, which is used in the country of Namibia. A conservancy is a legal entity which grants ownership and responsibility for allowing limited farming or grazing on lands predominately managed for wildlife. Income from activities occurring in these particular areas are “pooled and the community collectively determines how it should be spent.” The integration of tribal culture and rights in one unified national framework will assist in developing high levels of protection for wildlife – particularly the tiger. Protection for the tiger is not mutually exclusive with protection of tribal life and cultural heritage.

However, consideration also needs to be given to those tribal groups that do not want to stay in tiger reserve areas. In one village, monsoons and the people-tiger conflict led to the “collective decision” of 350 tribal families to ask for compensation to be relocated from a tiger reserve area, despite the fact that the villagers had been there for four generations. Measures for relocation and compensation should follow the guidelines the Delhi High Court reiterated in cases such as Ajay Maken & Ors. v. Union of India which are consistent with international covenants.

Wildlife trafficking also represents a huge challenge in protecting the remaining tiger population in India. Corruption is one of the largest contributors allowing the illegal wildlife trade to succeed. Given the national government’s attitude towards the tribal peoples it places the tiger in a vulnerable position because it has fewer protectors. India’s

139 Sekhsaria, supra note 87. See also Rastogi, supra note 81, at 334.
140 Fraser, supra note, at 204.
tigers are also vulnerable given their geographic location to China. Vanda Felbab Brown in her book *The Extinction Market* states, “China in particular has become like a great vacuum cleaner, sucking natural environments empty of wildlife – not only in China and its neighbors, but also in Africa and elsewhere…” The creation of the “Belt Road Initiative” will undo the work that India has done to protect the tiger as the large infrastructure project could pose “a number of potential environmental impacts and could threaten biodiversity” notably in Southeast Asia. The Belt Road Initiative and other projects will increase the demand for new roads to be built in regions that have unique ecological value. In a study conducted by three universities in North America, researchers found “the high density roads in those forests will jeopardize tiger recovery.” Researchers recommend safeguarding species through appropriate zoning, decommissioning of roads in critical areas, and implementing proper national laws.

A community-based approach may also be the solution to stopping wildlife trafficking. The amount of monitoring and protection required for a territory and costs to stop this particular crime are enormous. India is familiar with these kinds of approaches as it has implemented a successful community based program in West Bengal to protect the rhino. A community-based approach to respond to wildlife trafficking is also consistent with several policy developments within the international community. The London Declaration (2014) emphasized the need to work with local communities. The Kasane Statement (2015) emphasized strengthening legislative frameworks to incorporate the rights of local people in combatting the illegal wildlife trade. The Brazzaville Declaration (2015), the Hanoi Statement (2016), and even UN Sustainable Development Goal 15, echo these same sentiments.

In addition to integrating tribal voices into wildlife protection and anti-trafficking initiatives, India must also make an effort to reduce and eliminate the stigma and falsehoods spread regarding forest dwellers. This includes dismantling the laws and attitudes which reinforce past colonial attitudes. The tribes that were declared “criminal” by the British in 1871 and later became “denotified tribes” are a great example of how these vulnerabilities created by colonial legislation are still not rectified and can have adverse consequences to a greater goal. These tribal communities have been driven to a “destitute existence,” which leaves them vulnerable to aiding and abetting organized crime syndicates that make millions off of the trade of tiger parts. Further, as FRA

147 Id.
149 Id at 8.
studies have shown, prejudice against Adivasis has denied them appropriate access to justice and participation in the processes assigned to them under law. Eliminating the stigma is consistent with India’s obligations under the Convention on the Elimination of Racial Discrimination and the articles found in UN DRIP.

Finally, Britain’s role in India’s environmental history should not be forgotten or ignored. “In the South Asian context, therefore, environmental history needs to broaden its reach so that it may further advance our understanding of the way in which some social-historical inequalities in this region have been generated.” The United Kingdom should make a strong effort to assist India in bringing back Indian tiger populations. Two ideal measures would be earmarking aid (already provided to India by the United Kingdom) to help end poaching in the region. The United Kingdom can also assist in building appropriate corridors within India for tigers to roam free as they once did for thousands of years.

Conclusion

Injecting colonial environmental history into the context of wildlife preservation is an important and critical exercise in understanding what has gone wrong for the tigers in India. The British Empire depleted India of a significant amount of its environmental resources, criminalized the lifestyle of tribal peoples, and decimated the tiger population. India, while it has progressed in protecting the world’s largest remaining tiger population, has kept the chains of colonization on tribal people, specifically on those who have a close relationship with the forest areas where tigers reside.

India will need to revisit and change its entire framework of wildlife, land, and tribal policies to appropriately marry them to international human rights principles as codified in Indian law. One critical element to a successful policy will be incorporating the voices of tribal peoples. In addition, re-evaluating the role that Adivasis play in the protection of the environment and wildlife will be critical in addressing the biggest threat that now exists to tigers in India – poaching.

Adivasi people can lead (as they once did) in protecting this important cultural icon and species. They can also be comfortable knowing that they are also protecting their own homes. The Indian tiger is holding on to existence with its dear life. If the international community, and India in particular, are truly committed to saving the species, it is time to shed old attitudes and usher in fresh attitudes about the heroic role that Adivasis can have in saving the Indian tigers. In the age of extinction, a duty to protect and assist is owed to both Adivasis and tigers.

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152 Swami, supra note 31, at 128.
FROM NON-AGRESSIVE MILITARY ACTIVITIES IN OUTER SPACE TO SPACE CONFLICTS

Insights into the lawfulness of current military activities in outer space, the applicability of IHL in the outer space context and State responsibility and individual criminal liability for environmental damage in outer space

Beatrice L. Hamilton

Developments in space technologies and in particular satellites enable the facilitation of enhanced services such as telecommunication, Global Positioning Systems (GPS), weather forecasting and imagery, currently used for both civilian and military purposes. The growing reliance on space assets for military purposes resulted in a new space race, also typified by the development of defensive capabilities and the weaponisation of outer space, and with it in speculations on the prospect of armed conflict in outer space. Currently, there is a strong focus on the question whether International Humanitarian Law, considered the lex specialis of armed conflict, is applicable in outer space and if so, to what extent. The first part of this article engages with the question whether the militarisation and weaponisation of outer space are lawful. The second and third parts of this article question whether the rules and principles relevant to the protection of the environment during armed conflicts are applicable in outer space and if so, whether the Law of Armed Conflict can operate effectively in that context. The remainder of the article considers the issue of State responsibility for environmental damage in outer space and the applicability of Article 8(2)(b)(iv) of the Rome Statute of the International Criminal Court in the outer space context.

Keywords: Space Law, OST, satellites, military activities, peaceful purposes, ASAT, IHL, armed conflicts, environment, space debris, State responsibility, Rome Statute, Article 8(2)(b)(iv)

If there is one general rule which can be deducted from the Balkan conflict and that of Operation Desert Storm, it is the following: ground superiority is contingent upon air superiority and that air superiority is now contingent upon space superiority

Michel Bourbonniere and Louis Haeck

Introduction

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153 Edinburgh Centre for International and Global Law, Faculty of Law, Edinburgh University and Rolin-Jaequemyns International Law Institute, Faculty of Law, Ghent University.
While current military uses of outer space are generally limited to the deployment of satellites (both military and dual use), the utilisation of space technologies to further on-ground warfare (generally through the use of services enabling intelligence, communication and navigation) and the development of defensive capabilities to secure these assets\textsuperscript{155}, the growth in the military uses of outer space and the strategic advantages of such uses raise concerns regarding the potential for armed conflicts in outer space.\textsuperscript{156} The number of participants in the space race is increasing. Emerging participants include the NATO States, Japan, New Zealand and Australia as well as India (which is now the fourth State to have tested an anti-satellite (ASAT) weapon\textsuperscript{157}), Iran, and Israel.\textsuperscript{158} The number of space assets and military capabilities of the main space-active States (the U.S., Russia and China) has also developed substantially, with main developments occurring mainly in the areas of intelligence, surveillance, reconnaissance, communications, command and control.\textsuperscript{159} The U.S. Defense Intelligence Agency also suggests that China and Russia are currently developing means to counteract U.S. supremacy in outer space by exploiting its heavy reliance on space technology.\textsuperscript{160} Whether the use of force in outer space is likely to eventuate is a debated issue, however, not one that could be easily dismissed. As Freeland wrote:

\textit{Unfortunately, present indications suggest that there is an increasing likelihood that outer space will not only be used to facilitate armed conflict (as it already is) but might ultimately be a theatre of war, despite the efforts of the international community. The proliferation of military space assets means that, from a strategic viewpoint, the disabling or destruction of satellites used by another country may be perceived as giving rise to very significant advantages. The fact that it has not happened in the past is no reason to assume that we will never see a space conflict.}\textsuperscript{161}

The first part of this article engages with the question whether the militarisation and weaponisation of outer space are lawful. The second and third parts of the article question whether IHL rules and principles relevant to the protection of the environment during armed conflicts are applicable in outer space and if so, whether these rules and principles can operate effectively in that context. \textit{Jus in bello} relevant to the protection of the environment shares a common interest with general discussion on the applicability of IHL due to two particular risks. The first is the potential increase in space debris (including nuclear power sources) and as a result the increase in the risk of collusion between fragments and space assets and the second is the possibility that space debris

\textsuperscript{157} Sergio Marchisio, ‘The final frontier: Prospects for arms control in outer space’ (2019, European Leadership Network) 1.
\textsuperscript{159} ibid 126 - 127.
\textsuperscript{161} Freeland (n 4) 49.
may fall onto land. The remainder of the article considers the issue of responsibility for environmental damage and the potential applicability of Article 8(2)(b)(iv) of the Rome Statute of the International Criminal Court to space conflicts. Article 8(2)(b)(iv) of the Rome Statute classifies the Intentional launching of an attack in the knowledge that such attack will cause inter alia widespread, long-term and severe damage to the natural environment that would be clearly excessive in relation to the concrete and direct overall military advantage anticipated, a war crime.

**Are the militarisation and weaponisation of outer space lawful?**

The hard law legal framework regulating human activities in outer space consists of five core treaties: the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (the Outer Space Treaty or OST)\(^\text{162}\), which is the primary treaty regulating human activities in the outer space environment\(^\text{163}\), the 1968 Agreement on the Rescue of Astronauts and the Return of Objects Launched in Outer Space (the Rescue Convention)\(^\text{164}\), the 1972 Convention on International Liability for Damage Caused by Space Objects (the Liability Convention)\(^\text{165}\), the 1975 Convention on Registration of Objects Launched into Outer Space (the Registration Convention)\(^\text{166}\) and the 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (The Moon Agreement)\(^\text{167}\). A sixth treaty that is relevant to outer space is the Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer space and Underwater (the Limited Test Ban Treaty)\(^\text{168}\), which prohibits nuclear weapons tests in the atmosphere, in outer space and underwater.\(^\text{169}\)

The legal regime regulating human activities in outer space is founded on the principles of common interest, peaceful use, freedom, no appropriation, co-operation, mutual assistance and non-intervention. The preamble to the OST recognises the common interest of all mankind in the progress of the exploration and use of outer space for peaceful purposes. The principle of peaceful purposes is also codified is Article IV of the OST, which states that: *The moon and other celestial bodies shall be used by all States Parties to the Treaty exclusively for peaceful purposes.* Article I of the OST provides that the exploration and use of outer space, including the moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries and shall be the province of all mankind


\(^{163}\) Stephen (n 3) 86.


\(^{167}\) Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, Dec. 18, 1979, 1363 U.N.T.S. 3 [hereinafter Moon Agreement].


\(^{169}\) Limited Test Ban Treaty, Article I(1).
and that outer space including the moon and other celestial bodies shall be free for exploration and use by all States without discrimination of any kind. Article II of the OST provides that outer space, including the Moon and other celestial bodies, is not subject to national appropriation by either a claim of sovereignty, means of use or occupation or by any other means. Article V also provides that astronauts shall be regarded as envoys of mankind in outer space.

Article IX of the OST reflects the principles of non-intervention, co-operations and mutual assistance. Article IX provides that State parties to the OST shall be guided by the principles of co-operation and mutual assistance in the exploration and use of outer space and conduct all their activities with due regard to the corresponding interests of all other State parties. Article IX further prescribes that State parties must conduct an appropriate international consultation where they have reason to believe that an activity or an experiment planned by them or their nationals would cause potentially harmful interference with the activities of other States in the peaceful exploration and use of outer space.

Are current military activities in outer space consistent with the principle of peaceful use?

Although the OST prescribes that outer space shall be used for ‘peaceful purposes’, the OST does not define the term, which leads to the question whether peaceful use means no military activities whatsoever or merely military activities that are non-aggressive. If the term ‘peaceful purposes’ as stated in Article IV of the OST is interpreted to mean ‘no aggression’, then the non-aggressive military use of outer space could be conceived as permissible. What State practice has demonstrated thus far is that it is now generally accepted that the term ‘peaceful purposes’ is interpreted to mean ‘no aggression’ and that certain military activities in space are permissible\(^\text{170}\), as evidenced by the current use of outer space for military activities.

Does the OST support the current interpretation of peaceful use? Article III of the OST imposes the obligation that states shall carry on activities in the exploration and use of outer space in accordance with International Law including the Charter of the United Nations\(^\text{171}\) in the interest of maintaining international peace and security and promoting international co-operation and understanding. There are two points of view as to whether the OST permits military activities. The first is that Article III of the OST contemplates peaceful uses only, as demonstrated by the specific reference to the Charter of the United Nations, which is also strengthened by the prohibitions imposed by Article IV of the OST.\(^\text{172}\) Article 2(4) of the Charter of the United Nations reads as follows: all members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the purposes of


\(^{172}\) Freeland (n 4) 44-45.
the United Nations. Article 2(4) reflects the principal tenet of the United Nations to maintain international peace and security.\textsuperscript{173} Article IV of the OST prohibits the placing of nuclear weapons or any other weapons of mass destruction in outer space and the establishment of military bases, installations and fortifications, the testing of any kind of weapons and the conduct of military manoeuvres on the Moon and other celestial bodies. The second point of view is that although on its own Article III may suggest that the intention of the OST was that Space will be used for peaceful purposes only, when combined with Article IV, Article III could be interpreted to have contemplated that military activities that are consistent with the UN Charter and other International Law (that is, non-aggressive activities that do not involve the threat or use of force) are permissible as long as they do not breach the limitations imposed by Article IV of the OST.\textsuperscript{174} Whether the debate is still relevant bears its own uncertainties. It has been argued elsewhere that the debate whether the term ‘peaceful purposes’ means no military activities whatsoever or merely non aggression has become redundant since the militarisation of outer space is already a fact.\textsuperscript{175} Considering, however, that in accordance with Article 31(3)(b) of the Vienna Convention on the Law of Treaties\textsuperscript{176}, any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation shall be taken into account in the interpretation of a treaty, State practice can continue to influence the interpretation of the term.\textsuperscript{177}

Is the weaponisation of outer space permissible?

Subject to certain limitations the weaponisation of outer space is not prohibited. Article IV of the OST imposes only two prohibitions that limit the weaponisation of outer space. The first is the prohibition on the placing of nuclear weapons or any other weapons of mass destruction in outer space and the second is the prohibition on the establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres on the moon and other celestial bodies. The prohibition on the placing of nuclear/weapons of mass destruction in outer space reads as follows:

\begin{quote}
States Parties to the Treaty undertake not to place in orbit around the earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner.\textsuperscript{178}
\end{quote}

Technically, this means that the provision does not prohibit the deployment of conventional weapons, conventional weapons powered by a nuclear sources (not being

\textsuperscript{173} Charter of the United Nations, Article 1.  
\textsuperscript{174} Stephens (n 3) 80.  
\textsuperscript{175} While there is general agreement – but not complete unanimity – among space law commentators that this is directed against ‘non-military’ rather than merely ‘non-aggressive’ activities, the reality has, unfortunately, been different. It is undeniable that, in addition to the many commercial, civilian and scientific uses, outer space has and continues to be used for an expanding array of military activities. Unless concrete steps are taken to arrest this trend – which will require a significant shift in political will, particularly among the major powers – it is likely that space will increasingly be utilized to further the military and strategic aims of specific countries, particularly as military and space technology continues to evolve and develop., Freeland (n 4) 45.  
\textsuperscript{177} Freeland (n 4) 45.  
\textsuperscript{178} Outer Space Treaty, Article IV.
weapons of mass destruction) nor the entry into space of weapons that transit through space (for example, Intercontinental Ballistic Missiles (ICBMs), weapons of mass destruction and nuclear weapons) since they do not complete a full orbit. The precise wording of the prohibition on the establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres on the moon and other celestial bodies is as follows:

_The moon and other celestial bodies shall be used by all States Parties to the Treaty exclusively for peaceful purposes. The establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres on celestial bodies shall be forbidden. The use of military personnel for scientific research or for any other peaceful purposes shall not be prohibited. The use of any equipment or facility necessary for peaceful exploration of the moon and other celestial bodies shall also not be prohibited._

The prohibition, therefore, is limited to: (1) the particular activities listed, being: the establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres, which means that military activities outside those specified are not necessarily prohibited, and (2) to the conduct of these activities on the Moon and other celestial bodies only. The requirement that the Moon and other celestial bodies shall be used exclusively for peaceful purposes implies by its own wording that the term ‘shall be used... exclusively for peaceful purposes ’ is also limited to the Moon and other celestial bodies, which in itself could be interpreted to mean that military activities around the Moon and other celestial bodies are permissible.

**Does the Law of Armed Conflict extend to outer space?**

The applicability of International Law in outer space is generally uncontested. Article III of the OST provides that State parties to the OST shall carry on activities in the exploration and use of outer space, including the Moon and other celestial bodies, in accordance with International Law, including the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international cooperation and understanding. Whether the OST invites the applicability of IHL in particular, however, is a question of debate. On the one side it could be argued that although Article III of the OST does invite the applicability of International Law, the Article also makes clear reference to the Charter of the United Nations and the objects of peace, security, cooperation and understanding, which could reasonably be interpreted to mean that Article III extends to peacetime International Law only. On the other hand it could be argued that since Article III of the OST provides that all activities in outer space shall be conducted in accordance with International Law, and since IHL is a body of law part of International Law, IHL is applicable. If one takes the view that what is not expressly

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179 Boothby (n 3) 202-203.

180 Outer Space Treaty, Article IV.


182 Freeland (n 4) 49.
excluded is not necessarily precluded, it could be argued that since Article III does not expressly exclude the applicability of any specific body of International Law, conceptually, all relevant International Law, including IHL, could be considered applicable. If it is accepted that in principle IHL is applicable, the question then becomes which IHL rules and principles in particular could be considered relevant. To me, the most logical approach would be that providing that the military activities involved satisfy the threshold for use of force required to render the activities an armed conflict, unless a particular provision or principle is expressly excluded, IHL in its entirety should in as far as possible be considered applicable (although not without challenges) and should be implemented if and as each rule or principle becomes relevant. While some IHL rules may not appear relevant at this point in time, there is no knowing how the methods and means of space warfare may develop in the future, or for that matter what the future uses of outer space may be (including the possibility of human settlement). Considering the current interpretation of the term 'peaceful use' as non-aggressive, there is no knowing what the 'no appropriation' principle for example, or the prohibition on the establishment of military bases, installations and fortifications on celestial bodies may be interpreted to mean in the future. The focus, therefore, should be on understanding the relationship between IHL and Space Law and on resolving any conflicts of law that may arise. If, however, one had to argue the applicability of IHL relevant to the protection of the environment during space conflicts, support for the applicability the main instruments and customary principles could be derived from the treaties and principles themselves, the OST and the general principles of International Law.

The main treaty *jus in bello* relevant to the protection of the environment are the Hague Convention IV and its Hague Regulations\(^{183}\), the 1949 Geneva Convention IV\(^{184}\) and Additional Protocol I to the 1949 Geneva Conventions\(^{185}\). Additional Protocol I embodies two out of the three provisions that afford protection to the environment in its own right. The first is Article 35(3), which prohibits the use of methods and means of warfare that are intended or may be expected to cause widespread, long-term and severe damage to the environment. Article 55(1) of Additional Protocol I, the second provision to offer direct protection, imposes *inter alia* a duty of care to protect the natural environment against widespread, long-term and severe damage.\(^{186}\) It could ,however, be argued that since the second part of Article 55(1) states that the protection mentioned includes a prohibition on the use of methods or means of warfare that are intended or may be expected to cause such damage to the natural environment and thereby to prejudice the health or survival of the population, the duty of care Article 55(1) applies only when the specified considerations are present. At the minimum, however, it could be argued that since Article 35(3) deals with the protection of the environment *per se* and does not


\(^{185}\) Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, 8 June, 1977, 1125 U.N.T.S. 3 [hereinafter Additional Protocol I].

\(^{186}\) Additional Protocol I, Article 55(1).
entertain the contingencies of war (for example, military necessity) or any anthropocentric considerations and since the obligations imposed by the provision are owed to the environment itself, the applicability of Article 35(3) is not limited to the terrestrial environment and extends to outer space. The second instrument to offer direct protection is ENMOD, which prohibits the use of environmental modification techniques having widespread, long-lasting or severe affects as means of destruction, damage or injury to another State party. Environmental modification techniques refer to: any technique for changing - through the deliberate manipulation of natural processes - the dynamics, composition or structure of the Earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space. Although whether ENMOD would become relevant in the context of space conflicts in the future is yet unknown, it does state its applicability.

The Geneva Conventions also imply their applicability in the context of outer space. Common Article 1 to the Geneva Conventions states that the High Contracting Parties undertake to respect and to ensure respect for the conventions in all circumstances. It has been argued that the term 'in all circumstances 'should be interpreted as extending the applicability of the Geneva Conventions to any armed conflict wherever it may occur, including outer space, as is also supported by the applicability of the Geneva Conventions to areas beyond national jurisdiction such as the high seas. The applicability of the Hague Law in the outer space context has been subject to debate. It has been suggested that since the focus of the Hague Convention IV is on the law and customs of war on land, the convention does not demonstrate the intention that its application extends to the sea, air or outer space. Considering, however, that the Hague Convention is a document in respect of already existing Customary Law (as also reflected by its name: Convention Respecting the Laws and Customs of War...), the question to be asked is whether Customary Law could be considered applicable in outer space. It has been argued that since Customary International Law arises from opinio juris and State practice, unless the norm is established subject to specific limitation/s it cannot be considered to include such limitation/s and therefore, Customary International Law that regulates the conduct of the parties without distinction of the location where such conduct occurs, should not be taken to exclude outer space (or for that matter other novel domains such as cyberspace). The applicability of Customary International Law is also supported by the Martens Clause. The Martens Clause, a key IHL principle, provides inter alia that in the absence of treaty provisions, the parties to the conflict remain under the protection

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187 Stephens and Steer (n 18) 9
189 ENMOD, Article I.
190 ENMOD, Article II.
192 Mačák (n 29) 20
193 ibid 20
194 ibid 22
and rule of International Law as they arise from Customary International Law, the Laws of Humanity and the dictates of public conscience.\(^{195}\) Other relevant Customary International Law are the grave breaches of the Geneva Conventions and Additional Protocol I and include: the extensive destruction and appropriation of property not justified by military necessity and carried out unlawfully and wantonly\(^{196}\), launching an indiscriminate attack against civilian objects in the knowledge that such attack would cause excessive damage\(^{197}\), attacks against works and installations containing dangerous forces\(^{198}\), making non-defended localities and demilitarised zones the object of attack\(^{199}\) and subject to conditions, making clearly-recognised historic monuments, works of art or places of worship that are afforded protection by special agreement the objects of attacks causing extensive destruction\(^{200}\). Considering that some space assets are powered by nuclear sources, the prohibition on attacks on certain works and installations containing hazardous forces\(^{201}\) may be relevant to attacks on nuclear powered space assets, however, the applicability of the prohibition is uncertain in view of the words 'works' and 'installations'. Considering the current militarisation and weaponisation of outer space (perhaps with the exception of the Moon and other celestial bodies) it is unlikely that at this point in time the area of space subject to human activities could be classified as a non-defended or demilitarised zone in accordance with Articles 59 and 60 of Additional Protocol I. Article IV of the OST could also be argued to import some of the rules regulating the use of certain weapons through the prohibition on the placing in orbit around Earth any objects carrying nuclear weapons or any kind of weapons of mass destruction, the installation of such weapons on celestial bodies and the stationing of such weapons in outer space in any other manner, and in particular the Biological Weapons Convention\(^{202}\) and the Chemical Weapons convention\(^{203}\).\(^{204}\)

Is IHL suitable to govern in outer space?


\(^{196}\) Geneva Convention I, Article 50; Geneva Convention II, Article 51; Geneva Convention IV, Article 147; Article 147 empowers Article 53 of the Geneva Convention IV, which prohibits the destruction of property where the destruction is not rendered absolutely necessary by military operations in the context of occupation.

\(^{197}\) Additional Protocol I, Article 85(3)(b).

\(^{198}\) Additional Protocol I, Article 85(3)(c).

\(^{199}\) Additional Protocol I, Article 85(3)(d).

\(^{200}\) Additional Protocol I, Articles 53 and 85(4)(d).

\(^{201}\) Additional Protocol I, Article 56(1).


\(^{204}\) Boothby (n 3) 203.
A relevant question to the applicability of IHL is whether IHL, even if considered applicable, is suitable to govern in outer space. There are two aspects to this question. The first is whether IHL is sufficiently compatible to operate in an environment designated to peaceful use and the second is whether the rules and principles of IHL can effectively operate in the unique environment of outer space and in the context of high-tech methods and means of warfare that are likely to typify space conflicts.

The difference between Space Law and other peacetime regimes such as International Environmental, is that while International Environmental Law is a body of law that prescribes rules concerning the protection of the environment that could potentially be negotiated with or even incorporated into the Law of Armed Conflict, Space Law actually prescribes peaceful use. Considering that *jus in bello* does not prohibit armed conflicts, but rather, limits itself to regulating the conduct of the parties with the aim of reducing superfluous damage and unnecessary suffering\(^{205}\), while accommodating the contingencies of war, inconsistencies or even conflict of law are likely to arise. This, however, does not mean that IHL can be excluded. Considering the current space race, unless Russia’s Draft Treaty on the Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force Against Outer Space Objects (PPWT) is accepted (both the 2008 draft and the 2014 revised draft submitted to the Conference on Disarmament have been rejected\(^ {206}\) and the risk of use of force in outer space is considered insignificant, these inconsistencies need be addressed. It has also been argued that since the development of new treaties is unlikely, the most likely development in the law governing human activities in outer space is that of Customary Law.\(^ {207}\) While still early days, it is likely that the rules of engagement as established between the space-active states and State practice would play a role in shaping the foundations for further developments. While it is not disputed that the Law of Armed Conflict has not in itself yet developed so as to directly address the context of outer space and associated technologies (such as cyber warfare)\(^ {208}\) and there is much that would need to be determined by State practice, unless one is willing to accept that the faith of space would be even in the slightest directed by current military concerns (and potentially political considerations), the legal framework must be fully realised, not the least through the applicability of IHL. A useful approach to resolving any inconsistencies that exist between Space Law and *jus in bello* and that would potentially mitigate what could be described as the importation of lesser protections would be the interpretation of the Law of Armed Conflict, and in particular the rules relating to weaponry, according to the standards imposed under Space Law in as far as possible. Such approach would be consistent with similar recommendations for adapting the Law of Armed Conflict to contemporary circumstances, for example, Bothe’s suggestion that the core IEL principles should be inserted in the application of IHL in order to address environmental concerns.\(^ {209}\)

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205 Hague Regulations, Article 23(e); Additional Protocol I, Article 35(2).
206 Freeland (n 4) 50
207 King and Blank (n 6) 129.
208 Stephens (n 3) 97.
There is also a certain discomfort in the fact that outer space, or more precisely, services provided by space assets that are located in outer space (the use of which is designated for peaceful purposes) are used to support terrestrial warfare. The question, therefore, is not only whether IHL extends to outer space, but also whether Space Law should extend to the utilisation of non-aggressive activities for aggressive purposes. The active use of space technology to further on-ground warfare is now common place. The 1991 Gulf War, for example, was labelled a ‘space war’ due to the Coalition’s material reliance on GPS services during Operation Desert Storm (with some 60 satellites used\(^\text{210}\)).\(^\text{211}\) Other space-technology facilitated armed conflicts outside the 1991 Gulf War include NATO’s operations in Yugoslavia in 1999 (which are considered to have been more heavily reliant on space technologies than the 1991 Gulf War\(^\text{212}\)), the Coalition’s actions in Afghanistan in 2001 and the invasion of Iraq in 2003.\(^\text{213}\) In environmental terms, the use of space technologies to support the implementation of military operations in the terrestrial environment means that the environmental damage caused by armed conflicts is likely to increase. Although the use of space technologies is likely to enhance precision and hence potentially reduce the level of collateral damage caused, at the same time the use of space technologies enables military operations that otherwise would not been possible, for example, navigation through clouds of smoke.

*Challenges relating to the practical implementation of the rules and principles of IHL in outer space*

The unique characteristics of space assets currently in use, the methods and means of warfare that are likely to be employed during space conflicts and the characteristics of outer space itself present unique challenges to the practical implementation of the rules and principles of IHL in the outer space context. The Law of Armed Conflict applies only when an armed conflict already exists, which means that the level of force used must be sufficient so as to render a military activity an armed conflict. Would the use of a single kinetic weapon (for example, an ASAT missile) to destroy a single satellite constitute sufficient use of force to trigger the applicability of the *jus in bello*? It is generally accepted that any use of force by one State against another (perhaps short of minor incidents\(^\text{214}\)) is sufficient use of force to trigger an international armed conflict since belligerent intent is an implied prerequisite for the existence of an international armed conflict.\(^\text{215}\) The situation, however, is more nuanced in the case of non-international armed conflict. The


\(^{211}\) Dale Stephens ‘Law and War in Outer Space’ (Research Paper No. 18-03, 2018, Adelaide University Research Unit on Military Law and Ethics) 32.

\(^{212}\) Ramey (above n 58) 122.

\(^{213}\) Stephen Freeland, ‘Legal Regulation of the Military Use of Outer space - What Role for International Humanitarian Law?’ (Bruges Colloquium Technological Challenges for the Humanitarian Legal Framework, Bruges, October 2010) 93.


minimum requirements for sufficient use of force in non-international armed conflicts are: (1) that the armed forces involved must be organised, and (2) that a minimum level of intensity must exist (which is higher than civil disturbances that require domestic policing action only).216 This means that use of force by an actor not a member of an organised group would not satisfy the threshold. The use of ‘soft-kill' methods (for example, electronic interference with the Satellite’s communication systems or cyber attacks217), may also presents difficulties. Considering that interference with a satellite could be executed through ‘soft kill’ methods, the question arises whether ‘soft-kill' methods such as electronic interference for example, would be considered sufficient use of force. The Tallinn Manual218 (although non-binding) offers some clarification in the context of cyber warfare, The view of the International Group of Experts is that any cyber operation that rises to the level of an armed attack in terms of scale and effects and is conducted by or otherwise attributable to a State, qualifies as a ‘use of force however,'219 given the threshold of violence (and the degree of organisation of the armed groups) that is required for a non-international armed conflict, cyber operations in and of themselves will only amount to a non-international armed conflict in exceptional cases.220 Whether this would apply to other ‘soft kill’ methods is also uncertain.

Distinguishing between military objectives and civilian objects may also prove particularly difficult in the context of outer space since space assets are generally used for both civilian and military purposes.221 The dual use of space assets for civilian and military purposes also renders the implementation of the precautionary principle difficult. Article 57 of Additional Protocol I imposes inter alia the obligations that in the conduct of military operations constant care shall be taken to spare civilian objects222 and that an attack be cancelled or suspended if it becomes apparent that the objective is not a military one.223 The main provision for the protection of the environment, Article 35(3) of Additional Protocol I, imposes a significantly high threshold capable of enabling even significant damage to escape the provision. If the cumulative requirement of ‘widespread, long-term and severe’ damage is a problem on Earth, the vastness of outer space certainly magnifies this problem. The Principle of Proportionality suffers similar difficulties. The Principle of Proportionality prohibits damage that is excessive in relation to the military advantage sought by the military action.224 Considering that the outer limits of outer space are undefined, establishing the magnitude of damage may prove difficult. Foreseeability (and certainty) of the exact nature of the environmental damage that could be caused by a military action are also extremely difficult.225 In terms of prevention, Rule

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217 Luca del Monte, ‘Understanding the Physics of Space Security’ (Bruges Colloquium Technological Challenges for the Humanitarian Legal Framework, Bruges, October 2010) 85; Marchisio (n 5) 2.
219 Tallinn Manual 2.0, Commentary to Rule 69, 6.
221 Stephens and Steer (n 18) 18.
222 Additional Protocol I, Article 57(1).
223 Additional Protocol I, Article 57(b).
224 Additional Protocol I, Articles 51(5)(b), 57(2)(a)(iii) and 57(b).
225 King and Blank (n 6) 129.
44 of the ICRC Study on Customary International Humanitarian Law[^226] states that methods and means of warfare must be employed with due regard to the protection and preservation of the natural environment and that in the conduct of military operations all feasible precautions must be taken to avoid and in any event to minimise incidental damage to the environment. Considering the vastness of outer space and the state of limited scientific knowledge, it is difficult to appreciate what the appropriate measures would be. Can the above mentioned rules and principle be sufficiently adapted to operate in the outer space context? There is no reason why not since as discussed earlier, State practice is likely to play a significant role in the interpretation of the Law in the outer space context. This in itself is not a novel approach since the Law of Armed Conflict has often been said to be more widely drafted so as to enable its applicability in unanticipated circumstances. A safety net and an aspect capable of balancing any substantial distortions is the importance of space technology to the public at large, which means that not only space security is now a shared concern[^227], but also that any damage to public and private infrastructure is likely to become subject to and hence further regulated by public scrutiny. Establishing a threshold for ‘widespread’, ‘long-term' and ‘severe’ damage for the purpose of Article 35(3), however, may present greater difficulties (at least in the near future) for the simple reasons that the probability that any State would intentionally seek to risk its own assets, even if an attack would be launched by a non-space-active party, the current nature of space assets does not invite such extreme action, and unless the outer boundary of space would be delimitated, the calculation of ‘widespread, long-term and severe ’damage is likely to remain indeterminate.

Responsibility for environmental damage and the applicability of Article 8(2)(b)(iv) of the Rome Statute in outer space

Currently, International Law (not withstanding regional instruments) does not impose criminal liability for environmental damage on States and the only obligation of the State causing the damage is to make reparations[^228], whether the damage is caused by peaceful activities or is the result of an armed conflict. Peaceful activities in outer space (which according to current interpretation include the weaponisation of outer space in accordance with the limitations imposed by Article IV of the OST and other non-aggressive military activities) are governed by the rules and principles of Space Law. Article VII of the Outer Space Treaty provides that a State party that launches or procures the launching of an object into outer space and a State party from whose territory the object is launched, is internationally liable for damage that is caused by the object or its component parts to another State party (or its persons) either on Earth, in the air or in outer space. The Liability Convention imposes a stricter regime for damage caused by space objects, however, the stricter regime is limited to damage that is caused either on Earth or in the air. Article II of the Liability Convention states that the launching State


[^227]: Marchisio (n 5) 2.

shall be absolutely liable to pay compensation for damage that is caused by its space objects on the surface of Earth or to aircraft in flight, and therefore is a strict liability provision. Space objects are defined so as to include their component parts as well as their launch vehicles and parts thereof.\(^229\) Pursuant to Article III of the Liability Convention, if the damage is caused to a space object (or persons or property on board) in a place other than on the surface of Earth, the State responsible is only liable if the damage occurred due to its fault or the fault of persons it is responsible for. The operation of the Liability Convention in the context of damage to space objects, however, has not yet been tested. While the opportunity to find under the Convention did arise in connection with the Soviet Union Cosmos 954 incident, the claim was settled with the payment of $3,000,000.00 (half the amount claimed by Canada).\(^230\) The OST also imposes international responsibility under Article IX for breach of the principle of non-intervention. The first part of Article IX (which is the outmost environmental provision of the OST) states that:

\[...\]States Parties to the Treaty shall pursue studies of outer space, including the moon and other celestial bodies, and conduct exploration of them so as to avoid their harmful contamination and also adverse changes in the environment of the Earth resulting from the introduction of extraterrestrial matter and, where necessary, shall adopt appropriate measures for this purpose.\]

The second part of Article IV imposes the duty of consultation where a State party has reason to believe that an activity or experiment that the State or its nationals plan to conduct in outer space would cause potentially harmful interference with activities of other State parties in the peaceful exploration and use of outer space. Consultation therefore must be conducted prior to proceeding with the planned activity or experiment. Thus far, the operation of Article IX of the OST was considered twice. The first instance was in relation to China’s 2007 destruction of its own FY-1C weather satellite at an altitude of about 537 miles without prior consultation and the second was in relation to the United States’ 2008 destruction of its own USA-193 satellite at an altitude of about 133 miles, which the U.S. claimed did not invoke State responsibility since the satellite fell into low orbit and its destruction was necessary.\(^231, 232\) It has been argued that had the U.S. recognised the applicability of Article IX and conducted consultation, States planning kinetic experiments would now come under scrutiny if they do not consult.\(^233\) Recognition of the applicability of Article IX would have also provided the opportunity for setting a standard for appropriate conduct for consultation as well as for setting a threshold for debris generation that would clarify when a State should have reason to believe that its planned activities would cause harmful interference.\(^234\) It has also been suggested that since both incidents resulted in space debris, which present risk to space assets and hence potential interference with peaceful activities, the fact that China was

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\(^229\) Liability Convention, Article 1(d).
\(^230\) Ramey (above n 58) 91.
\(^232\) ibid 321-322.
\(^233\) ibid 353.
\(^234\) ibid 353.
considered in breach and the U.S. intercept was defensible\(^{235}\) suggests that the focus of the provision is on the knowledge that the activity will interfere with the peaceful use of outer space rather than on the interference itself\(^{236}\), which sets a high threshold for ‘potential harmful interference’ that would inform the interpretation of the provision in armed conflicts.\(^{237}\) Breaches of the Hague Convention IV, ENMOD, and the environmental provisions of Additional Protocol I also invoke State responsibility. It has been argued that even if reparations were strictly imposed, it is unlikely that the obligation to pay compensation would prove an effective enforcement mechanism since the likelihood that States would be willing to risk defeat is low.\(^{238}\) Interestingly, a similar observation has been made in regard to Liability Convention. It has been argued that although the Liability Convention imposes State responsibility, it is unlikely that the responsibility imposed would affect the decision of a State to engage in the use of force in space or its choice of the means and methods employed.\(^{239}\)

A second challenge to State responsibility is the principle of no appropriation, which could pose difficulties in the practical implementation of a compensation system for environmental damage in a no territory environment. If space conflicts are a threat, then the enforcement mechanisms for the law that governs military activities that satisfy the definition of international armed conflicts in outer space must be strengthened in as far as possible. One of the considerations relevant to this situation is the question whether Article 8(2)(b)(iv) of the Rome Statute of the International Criminal Court\(^{240}\) (ICC) is applicable in outer space. Pursuant to Article 5 of the Rome Statute, the ICC has jurisdiction to hear cases relating to the crime of genocide, crimes against humanity, war crimes and the crime of aggression. Pursuant to Article 5(c) of the Rome Statute, the ICC has jurisdiction to try war crimes for grave breaches of the 1949 Geneva Conventions and their 1977 Protocols and serious violations of the laws and customs applicable in international armed conflicts.

Indictments for war crimes, however, can be brought against individuals only\(^{241}\), for example, the commander responsible for the commission of the crime or persons following orders.\(^{242}\) The Rome Statute also offers limited remedies and does not include provisions that order recovery from individuals other than proceeds, property and assets that are derived from the crime itself.\(^{243}\) Nevertheless, despite these limitations, the threat of criminal prosecution is considered of high deterrent value.\(^{244}\) Article 8(2)(b)(iv) classifies as a war crime the:

\(^{235}\) ibid 351-352.

\(^{236}\) Stephens (n 3) 88.

\(^{237}\) ibid 88.


\(^{239}\) Ramøy (above n 58) 91.


\(^{241}\) Rome Statute, Article 25(1), (2) and (3)(a)-(d), (f).

\(^{242}\) Rome Statute, Article 28 and 33(1); Individual criminal responsibility does not affect State responsibility and is in addition to State responsibility, Rome Statute, Article 25(4).

\(^{243}\) Rome Statute, Article 77(2)(b).

\(^{244}\) Kevin Jon Heller and Jessica C. Lawrence, ‘The limits of Article 8(2)(B)(IV) of the Rome Statute, the first ecocentric environmental war crime’ (2007) 20 GiELR 1, 12.
Environmental Crimes

Intentionally launching an attack in the knowledge that such an 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 environment that would be clearly excessive in relation to the concrete and direct overall military advantage anticipated.

Article 8 of the Rome Statute lists other crimes that are relevant to the protection of the environment, however, these are predominantly anthropocentric and lend to the protection of the environment only to the extent of its role as part of the anthropocentric interest addressed. Also noted is that Article 8 does not address nuclear, biological or chemical weapons. Articles 8(2)(b)(xvii) and (xviii) only refer to poison or poisoned weapons and poisonous or other gases and analogous liquids, materials or devices respectively.

Is Article 8(2)(b)(iv) of the Rome Statute applicable in outer space?

Conceptually, there is no reason why Article 8(2)(b)(iv) should not not be considered applicable in outer space since neither Article 8(2)(b)(iv) nor the Rome Statute specifically exclude such applicability. The jurisdiction of the ICC to try war crimes, although subject to certain limitations and conditions, is universal, which in itself could be interpreted to mean that the jurisdiction of the Court is not subject to geographical limitations. Article 8(2)(b)(iv) does not make any reference to, nor imposes any conditions that expressly or impliedly exclude its applicability in outer space.

Is Article 8(2)(v)(iv) likely to be an effective mechanism in the context of outer space?

Although there is no apparent reason to exclude the applicability of Article 8(2)(b)(iv) in outer space and the provision is of high deterrent value, its effectiveness in the outer space context is likely to be hindered by the same factors that limit its effectiveness in the terrestrial environment, namely: barriers to access to the Court, the jurisdictional limitations of the ICC and the high thresholds that arise from the elements of the crime. An additional difficulty particular to the outer space context is the technical complexities of the methods and means of warfare that are likely to be employed during space conflicts (for example,

245 Other War crimes relevant to the protection of the environment under under the Rome Statute include: The extensive destruction and appropriation of property, not justified by military necessity and carried out unlawfully and wantonly (a grave breach), Article 8(2)(a)(iv); Intentionally directing attacks against civilian objects, Article 8(2)(b)(ii); Attacking or bombarding, by whatever means, towns, villages, dwellings or buildings which are undefended and which are not military objectives, Article 8(2)(b)(v); Destroying or seizing the enemy’s property unless such destruction or seizure be imperatively demanded by the necessities of war, Article 8(2)(b)(xiii); Pillaging a town or place, even when taken by assault, Article 8(2)(b)(xvi); Employing poison or poisonous weapons, Article 8(2)(b)(xvii); Employing asphyxiating, poisonous or other gases, and all analogous liquids, materials or devices, Article 8(2)(b)(xviii).


247 Article 12(3) of the Rome Statute permits non-signatories to accept the jurisdiction of the ICC.
electronic attacks, automated weapons and potentially even Artificial Intelligence Weapons Systems). The involvement of these advanced technologies would demand that judges and experts would have sufficient knowledge and understanding of the technologies involved.248

To be heard, a case must be referred to the ICC by either a State party249, the Security Council250 or the prosecutor subject to the approval of the Pre-Trial Chamber.251 Both the Geneva Convention IV and Additional Protocol I impose on States the obligation to prosecute or extradite individuals that commit grave breaches of these conventions252, however, since Article 8(2)(b)(iv) is not listed under the heading ‘Grave breaches’, but rather is listed under the section for ‘Other serious violations of the laws and customs…’, States are under no formal obligation to do so. The only grave breach that relates to the environment is the breach of Article 53 of the Geneva Convention IV, which prohibits the extensive destruction and appropriation of property not justified by military necessity and carried out unlawfully253 and is listed in Article 8(2)(a)(iv) of the Rome Statute. Referrals by the Security Council require that the decision to refer the case must pass by a vote of nine of the fifteen members and that (other than on procedural matters) the nine votes must include the concurring votes of the permanent members, which are China, France, Russia, the U.S. and the UK and, which all have the power to veto the decision to refer the case to the Court.254 Considering that some of these countries are major participants in the militarisation and weaponisation of space, this may become a point of difficulty.

The jurisdiction of the ICC to hear cases relating to war crimes is also limited. The jurisdiction of the Court in relation to Article 8(2)(b)(iv) is conditional on the existence of an international armed conflict255, as is also evident by the fact that Article 8(2)(b)(iv) is listed under the heading ‘Other serious violations of the laws and customs applicable in international armed conflict, within the established framework of international law…’. The jurisdiction of the court is also limited to the most serious crimes of concern to the international community as whole256, to war crimes that are committed as part of a plan or policy or as part of a large-scale commission of such crimes257 and is also subject to State consent. Except for cases that are referred by the Security Council, for the Court to have jurisdiction, the State where the crime was committed or the State that the accused is a national of must accept the jurisdiction of the Court if the State concerned is not a

248 Lindsay Freeman, ‘Law in Conflict The technological transformation of war and its consequences for the International Criminal Court’ (2019) JILP 807, 855
249 Rome Statute, Article 13(a).
250 Rome Statute, Article 13(b).
251 Rome Statute, Article 13(c), 15(3) and (4).
252 Geneva Convention IV, Article 146; Additional Protocol I, Article 85(1); Other provisions for voluntary referral: ENMOD, Article IV and the Biological Weapons Convention, Article IV.
253 Geneva Convention IV, Article 147.
255 Rome Statute, Article 5(1) and 8(2)(b)(iv).
256 Rome Statute, Article 1.
257 Rome Statute, Article 8(1).
signatory to the Rome Statute.\textsuperscript{258} Since no State territory exists in space and registered space assets are only under the jurisdiction and control of the State\textsuperscript{259}, the reference to the State where the crime was committed is currently irrelevant. Pursuant to Article 12(2)(a) of the Rome Statute, however, the ICC may exercise jurisdiction over the State of registration if the crime was committed on board a vessel or aircraft. Whether this necessarily means that the ICC can exercise jurisdiction over the State of registration of a space asset on the basis that space is also a global common, however, is debatable.

An additional uncertainty that arises from the voluntary jurisdiction of the ICC is the question whether (providing that the case is not referred by the Security Council) the ICC has jurisdiction to hear a case in situations where the case is not referred by the Security Council and the relevant State is not a party to the Rome Statute and does not voluntarily accept the jurisdiction of the Court.\textsuperscript{260} The ICC also does not have jurisdiction to hear a case where the case is being investigated or prosecuted by the State which has jurisdiction over the case unless the State is either unwilling or unable genuinely to carry out the investigation or prosecution\textsuperscript{261}, where the State decided not to prosecute the person concerned, unless the decision resulted from the unwillingness or inability of the State genuinely to prosecute\textsuperscript{262}, where the person has already been tried by the relevant State\textsuperscript{263}, or where the case is not of sufficient gravity to justify further action by the Court\textsuperscript{264}. An additional issue is that Article 8(2)(e) of the Rome Statute on war crimes applicable in non-international armed conflicts does not list as a war crime the intentional launching of an attack in the knowledge that such an 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 environment that would be clearly excessive in relation to the concrete and direct overall military advantage anticipated. Considering that most armed conflicts today are non-international\textsuperscript{265}, this may become a point of difficulty if space assets would be utilised in non-international armed conflicts by a State, a non-State party or both. Whether armed groups involved in non-international armed conflicts have the capacity to do so or to cause widespread, long-term and severe environmental damage in outer space is uncertain, however, it must be borne in mind that some groups

\textsuperscript{258} Rome Statute, Article 12(2).
\textsuperscript{259} A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, Outer Space Treaty, Article 8.
\textsuperscript{260} Heller and Lawrence (n 92) 30
\textsuperscript{261} Rome Statute, Article 17(1)(a); The Preamble to the Rome Statute also emphasises that that the International Criminal Court established under this Statute shall be complementary to national criminal jurisdictions.
\textsuperscript{262} Rome Statute, Article 17(1)(b); Article 17(2) of the Rome Statute states that: In order to determine unwillingness in a particular case, the Court shall consider, having regard to the principles of due process recognized by international law, whether one or more of the following exist, as applicable: (a) The proceedings were or are being undertaken or the national decision was made for the purpose of shielding the person concerned from criminal responsibility for crimes within the jurisdiction of the Court referred to in Article 5; (b) There has been an unjustified delay in the proceedings which in the circumstances is inconsistent with an intent to bring the person concerned to justice; (c) The proceedings were not or are not being conducted independently or impartially, and they were or are being conducted in a manner which, in the circumstances, is inconsistent with an intent to bring the person concerned to justice.
\textsuperscript{263} Rome Statute, Article 17(1)(c).
\textsuperscript{264} Rome Statute, Article 17(1)(d).
\textsuperscript{265} Druml (n 94) 9.
have already demonstrated technological capacities in utilising electronic means and in particular the internet and social media.266

The elements of the crime as stated in Article 8(2)(b)(iv) are: (1) intentionally launching an attack, (2) in the knowledge that the attack will cause widespread, long-term and severe damage to the natural environment, and (3) which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated. In order to satisfy these requirements it must be shown that the accused knew that the attack will result in widespread, long-term and severe environmental damage as well as that the widespread, long-term and severe damage would be clearly excessive in relation to the overall military advantage anticipated. Apart from the obvious difficulties involved in proving what the accused knew in order to successfully establish mens rea, showing that the attack was launched in the knowledge that the attack will result in widespread, long-term and severe damage. An additional complexity is that the Rome Statute does not define the terms 'widespread', 'long-term' and 'severe 'damage, which means that not only it would be difficult to prove mens rea, actus reus is also uncertain.267 Considering that pursuant to Article 22(2) of the Rome Statute the definition of the crime must be strictly construed and in case of ambiguity the definition of the crime would be interpreted in favour of the person being investigated, prosecuted or convicted, the likelihood of succeeding in a claim on the basis of this requirement could be considered low.268 The provision also does not allow for negligence, wilful blindness or reckless behaviour.269 An additional complexity (which was already mentioned in the context of discussion on Article 35(3)) is the particular nature of the space assets currently in use. It is unlikely (at least for the time being) that the consequences of an attack on a one satellite (or even several satellites) would result in a degree of damage that would satisfy even a generous interpretation of ‘widespread, long-term and severe’ damage, particularly in an environment the outer boundaries of which are not delimited.

Conclusion

If there is anything that can be said with certainty it is that military activities in outer space are not likely to cease. Considering the importance of space assets in furthering on-ground warfare in particular, the prospect of attacks on space assets cannot be dismissed. The OST, which is the main instrument regulating human activities in outer space, makes no reference to armed conflicts and therefore cannot in its current state be considered sufficient to regulate the use of force in outer space should space conflicts become a reality. Whether the Law of Armed Conflict extends to outer space, a zone designated for peaceful purposes, is subject to debate as is the suitability of this body of law to govern in this unique environment and in the technologically advanced context that is likely to typify space conflicts. Nevertheless, unless it is accepted that the faith of outer space must be influenced by current security concerns, a legal regime capable of effectively regulating the use of force in outer space must be developed. This could be done either

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266 Freeman (n 96) 833.
267 Heller and Lawrence (n 92) 13.
268 ibid 13.
269 Drumb (n 94) 9.
through the inclusion of the rules necessary to effectively govern the use of force in the legal regime regulating human activities in outer space, or alternatively, by resolving any inconsistencies and conflicts of law that exists between IHL and Space Law. Given, however, that amendments to the hard law regime are considered unlikely, there is strong merit in developing a strong understanding of the relationship between IHL and Space Law, while at the same time encouraging dialogue contemplating international standards for thresholds of issue. Of main importance are thresholds for the use of force that consider contemporary methods and means of warfare, a clear threshold for the purpose of differentiating between civilian objects and military objectives in a dual use environment and a clear threshold for the purpose of the Principle of Proportionality that considers both the nature of space assets and the consequences of damage to these assets and the delimitation of outer space.

Considering the importance of space assets, it is not unreasonable to assume given sufficient risk security considerations would prevail (at least in the short term), which leads to the necessary conclusion that the enforcement mechanisms for the Law of Armed Conflict relevant to the protection of the environment must be strengthened so as to more effectively deter breaches. In its current state the legal regime prescribes State responsibility, which as has been recognised, is less than an optimal deterrent. Criminal liability for individuals responsible for environmental crimes, while of stronger deterrent power, is hindered by procedural and jurisdictional barriers that limit the number of cases heard as well as burdened by the high thresholds that arise from the elements of the crime itself, which are exacerbated in the outer space context. Of significant importance is the fact that the jurisdiction of the Court in relation to Article 8(2)(b)(iv) is limited to international armed conflicts. Considering that the most prevalent form of armed conflicts today is non-international and considering the possibility that such conflicts may extend to outer space in the future, there is strong merit in considering the extension of Article 8(2)(b)(iv) to non-state actors. This, however, would necessitate close attention to the requirement that the war crime must be part of a plan or policy or as part of a large-scale commission of such crimes.
'Drove my Chevy to the levee but the levee was dry': prosecuting water theft in the Murray Darling Basin of Australia

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Introduction
Much discussion of environmental crimes is at the macro level, leading to a focus on concepts such as ecocide and environmental crimes against humanity but environmental crimes at the micro level may also be significant. Accordingly, this article explores the criminalisation of certain water related conduct – conduct that includes water theft – in the domestic jurisdiction of New South Wales (NSW), Australia.

Water theft (a generic term, covering several water offences) has become a serious issue as water resources are placed under greater stress from increasing demand and reduced availability. In Australia, the driest inhabited continent on earth, this is particularly so. Consequently, the development of law and governance that effectively shares, 


271 Janice Gray would like to thank UNSW Law for funding support and James Clark for his research assistance.


distributes and regulates the taking of this valuable resource in a fair, efficient and equitable manner, in the context of climate change, is important. One approach that has been employed to help achieve these ends is to criminalise unauthorised abstractions (for example, without or in contravention of a water licence or other related governance instrument). But is this approach working? Is criminalisation the answer? Will it help ensure better resource sharing/allocation and compliance? And how effective can criminalising water theft be, if the institutional structures designed to support law’s implementation and enforcement, prove wanting?

In an attempt to answer some of these questions, the following discussion begins with some background on the Murray Darling Basin (MDB) itself and is followed by material setting out key state and federal legal and regulatory measures designed to govern water abstractions and sharing (so as to support reduced consumption), the breach of which, in many cases, now sounds in the criminal justice system. The article also considers inadequate monitoring, regulator inaction and the lack of political and other will that resulted in a failure to prosecute water theft. It references two specific cases (the Barlow case and the Harris case) where the parties, who were irrigators in the MDB, have eventually been prosecuted for a number of breaches which, in lay terms, may be called water theft. In both cases, the prosecution alleged that the parties took water in a manner contrary to the relevant authorisations and in so doing committed a criminal act; an offence. This discussion invites focus on the key underlying question, noted above, why criminalise?

The water narrative that unfolds also flags a number of tensions including the tensions between sharing and selfishness; markets and public administration, individualism and the common good, and transparency and secrecy; tensions with which effective governance must deal. Criminalisation is but one governance tool to address these tensions and help reduce unacceptable conduct. If the criminalisation tool is found wanting, alternative or complementary tools may need to be employed. In that context, Arlie Hochschild’s sociological immersion approach, which aims to reveal the deep story of the ‘other’, is proffered.

Background
The Murray Darling Basin
In order to contextualise discussion of water theft in the MDB, it is helpful to understand something of that river basin. The MDB is the largest river system in Australia, spanning more than 77,000 kilometres of mostly connected rivers. Its northern-most point is in the state of Queensland (QLD), but the Basin also extends south and west into NSW, the

Australian Capital Territory, Victoria and South Australia (SA). It takes its name from the
two major rivers: The River Murray and the Darling River.

Most food for the export\textsuperscript{277} and domestic markets is produced in the MDB.\textsuperscript{278} Such
production is heavily dependent on the 9,200 irrigated agriculture businesses across the
Basin.\textsuperscript{279} In 2017-18, more than 70\% of all Australian agricultural water use occurred
within the MDB.\textsuperscript{280} Perhaps unsurprisingly, irrigated agriculture has become
problematic because it uses such alarmingly high volumes of water.\textsuperscript{281}

The high levels of water consumption associated with irrigated agriculture in particular,
have also contributed to environmental harm and a Basin that is in crisis.\textsuperscript{282} The MDB, for
example, suffers from increased salinity, sedimentation, acidity and of course, low water
availability.\textsuperscript{283} Indeed, in early 2019 some of the Murray-Darling NSW tributaries stopped

\textsuperscript{277} Around two thirds of Australia’s agricultural products are exported. See Department of Agriculture,
\textsuperscript{278} About one third of Australia’s national food is produced in the MDB. See Murray Darling Basin
Authority (MDBA), \textit{Murray Darling Basin: Overview} (July 2014)
December 2019.
\textsuperscript{279} Murray Darling Basin Authority (MDBA), \textit{Discover the Basin: Key Facts}
Integrity as an Alternative Frame for the Water, Unconventional Gas and Food Nexus’ (2019) 59
Jurimetrics 10.
\textsuperscript{280} ‘In 2017-18 in the Murray Darling Basin...1.5 million hectares of agricultural land was irrigated (up
8\%) [and]...6.8 million ML of water was applied (up 7\%)’, Australian Bureau of Statistics, \textit{Water Use on
December 2019.
\textsuperscript{281} Rupert Quentin Grafton, ’Policy review of water reform in the Murray–Darling Basin, Australia: the
to water for agricultural production ‘Australian farms used a total of 10.5 million megalitres (up 5\%) of
water taken from various sources including: 3.9 million ML from irrigation channels or pipelines (up 6\%)
...3.0 million ML of water from rivers, creeks or lakes (up 4\%), ...
2.2 million ML of groundwater (up 19\%)...1.2 million ML from on farm dams or tanks (down 12\%) ...
158 thousand ML from recycled or reused water from off farm sources (up 15\%)’...[and]
54 thousand ML from a town or country reticulated mains supply (down 25\%); see Australian Bureau of
\textsuperscript{282} Other causes of environmental harm include drought and land clearances, see NSW Government, ‘Six
main risks to Murray-Darling Basin water’ (July 2006)
<https://www.dpi.nsw.gov.au/content/archive/agriculture-today-stories/ag-today-archives/july-
\textsuperscript{283} Murray-Darling Basin Authority (MDBA), ’Climate Change and the Murray-Darling Basin Plan’
change-discussion-paper-Feb-19.pdf> accessed 12 December 2019; Murray-Darling Basin Authority
Murray-Darling Basin Authority (MDBA), \textit{Drought in the Murray-Darling Basin} (Australian Government)
2019; See also Barry T Hart, ’The Australian Murray-Darling Basin Plan: Challenges in its Implementation
flowing. They ran dry.\textsuperscript{284} Meanwhile, Indigenous elders have claimed that poor MDB health has affected Indigenous people’s access to food and water, leading to a ‘second wave of genocide’.\textsuperscript{285} Against this backdrop and due to continuing demand in the face of scarcity, water has become a very valuable and highly sought-after resource in Australia.\textsuperscript{286}

Concern about serious environmental degradation and harm (including their effect on future human activity and indeed on human survival) has generated numerous approaches to regulate abstractions and in turn, reduce water consumption.\textsuperscript{287} Those approaches included licensing, water markets, water trading, water plans and sustainable diversion limits (SDLs). Such approaches have tended to impact on all users, but those who use the most water, such as irrigators,\textsuperscript{288} have arguably been more affected.

**Reducing Consumption – State-based approaches**

Both state-based and Commonwealth approaches to allocating water sustainably and reducing consumption, have been introduced. Key state-based approaches include the extensive legislative reforms passed by individual states, around the turn of the last century (the millennium reforms).\textsuperscript{289} Those reforms were designed to manage water resources more effectively by way of a water resources planning system that in NSW includes Water Sharing Plans (WSPs) operating in conjunction with a system of licensing, trading and markets. WSPs are very significant in the context of unauthorised water take (theft) because the plans include some of the key requirements with which there must be compliance for the take to be regarded as authorised. Two elements that a WSP must include and which are relevant to water theft are: (a) the rules for trading water held under water access licences (WALS) – known as dealing rules – and; (b) the requirements for


\textsuperscript{289} See the Water Management Act 2000 (NSW) (WMA); Water Act 2000 (Qld); Natural Resources Management Act 2004 (SA) and; Water Act 1989 (Vic).
water extraction under WALs.\textsuperscript{290} To avoid unauthorised take, it will, with few exceptions, be necessary to hold a water entitlement or an allocation\textsuperscript{291} (and comply with the relevant conditions).

A water entitlement is the generic name given to a perpetual share or percentage of water in a variable consumptive pool.\textsuperscript{292} In NSW, an entitlement is known as a WAL.\textsuperscript{293} Meanwhile, the actual annual allocation of water that an entitlement holder receives is, in NSW, known generically as an allocation. Authorised abstractions are dependent on compliance with the category and conditions of the WAL (covering the share, for example), the Works Approval (covering the specific type of pump, for example), Water Use Approval (covering the purpose/use for which the abstraction is possible, for example), the WSP (covering timing, for example) and other instruments that may be in place, such as those creating embargoes. Unauthorised take (and use) may be an offence under the relevant legislation,\textsuperscript{294} bringing that conduct within the domain of criminal law. Whether abstractions are authorised is primarily an issue for the regulator, who among other things is responsible for monitoring abstractions and checking compliance. A separate Natural Resources Regulator, established under the \textit{Natural Resources Access Regulator Act 2017} (NSW), has responsibility for compliance and enforcement of water management legislation in NSW.\textsuperscript{295}

If a person or business does not have the necessary entitlement or allocation, one will need to be purchased on the market. A complex system of water trading, introduced around the turn of the last century, makes this possible although there have been some unintended outcomes. As an allocative tool, trading was, for example, supposed to move water resources from low to high value use and consequently reduce overconsumption.\textsuperscript{296} Hence, it was expected that cotton growers would find their water-thirsty crops too expensive and instead move to growing less water intensive crops.\textsuperscript{297} However, the evidence indicates that a shift away from cotton growing has not occurred.\textsuperscript{298} Despite this, trading (along with the market more generally) continues to remain the key allocative tool in NSW.

\textsuperscript{290} WMA s20(1).
\textsuperscript{291} There are exceptions for example water for domestic and stock use; WMA s 52.
\textsuperscript{293} Note that the terminology is inconsistent, varying between different Australian jurisdictions.
\textsuperscript{294} In NSW the relevant legislation is the \textit{Water Management Act 2000} (NSW) (WMA).
\textsuperscript{295} Department of Industry, ‘About NRAR’ <https://www.industry.nsw.gov.au/natural-resources-access-regulator/about-nrar> accessed 24 October 2019. Formerly the relevant NSW regulator was WaterNSW.
\textsuperscript{298} In 2017-2018 ‘[i]rrigated cotton production and pastures for grazing were key contributors [to water consumption] with increases in both [the] area irrigated and volume of water applied’. In 2017-2018, 7.2
Reducing Consumption – Commonwealth Approach

Following the state-based turn of the century legislative reforms, the *Water Act 2007 Cth* (WA) was also passed. As a Commonwealth instrument its passage was dependent on a Commonwealth assertion of legislative powers and a referral of state powers because, in Australia, the Constitution provides that states, rather than the Commonwealth, have the right to make laws for water. The WA provides ‘overall governance and policy mechanisms’ but it operates in tandem with state laws and it is the (Basin) state laws (some of which are discussed above) that largely implement the ‘management and enforcement of water policy on the ground.’

The WA strongly embraces sustainability in its objects and is ‘more generally green friendly’ legislation, factors that have led to much criticism in some quarters and even a (thwarted) constitutional challenge. Importantly, the Act mandates the creation of the MDB Plan (MDBP) which is effectively an operational or implementational tool. It is meant to translate the WA’s objects into a form that allows those objects to be realised and accordingly provides for ‘Basin-wide environmental objectives for water dependant ecosystems of the Murray-Darling Basin’. Meanwhile the MDB Agreement, entered into between Basin States and the Commonwealth is designed, among other things, ‘to give effect to the Basin Plan, the Water Act and State water entitlements’.

The MDBP relies on several measures to help fulfil its objects. Three important measures are: (a) Sustainable Diversion Limits (SDLs)); (b) buy backs of water entitlements (held under licences) for the benefit of the environment; and (c) infrastructure/efficiency programs to facilitate reduced water take. In this article we focus on SDLs because it is the preservation of these limits which water theft potentially threatens.

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299 *Water Act 2007 (Cth) (WA).*


305 IA (2007) s 20(c).


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... million megalitres were applied to crops with cotton accounting for 2.8 million megalitres over 359 thousand hectares (up 10%). In the MDB specifically in 2017-2018 2.6 million megalitres were applied to cotton over 320 thousand hectares (up 4%). Quotation and figures from: Australian Bureau of Statistics, *Water Use on Australian Farms 2017-2018* <https://www.abs.gov.au/ausstats/abs@.nsf/mf/4618.0> accessed 6 December 2019.

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SDLs
The MDBP provides for ‘the establishment and enforcement of environmentally sustainable limits on the quantities of surface water and ground water that may be taken’.\textsuperscript{308} Those limits are known as SDLs.

SDLs are, therefore:

‘the ultimate quantitative control imposed by the Water Act [and are] intended to cap the volume of Basin water taken for consumptive use, such as for irrigated agriculture (subsec 22(1) item 6 and sec 23). [The SDL] must, in turn, ‘reflect an environmentally sustainable level of take’ (ESLT).\textsuperscript{309} Meanwhile, the ESLT has at its core ‘the level of take beyond which key environmental values would be compromised’.\textsuperscript{310}

Put another way, SDL are mechanisms that, through their relationship with the ESLT, limit or reduce how much water may be taken from the MDB.\textsuperscript{311} Water take includes: removal by pumping or siphoning; reducing the flow by stopping, impeding or diverting water; releasing water from a lake or wetland; and permitting water to flow from a well or course.\textsuperscript{312} Water take also covers storing water if ancillary to any of the above methods.

The Basin SDLs were set by the Murray Darling Basin Authority (MDBA)\textsuperscript{313} which also was responsible for developing the MDBP itself.\textsuperscript{314} As a preliminary step in this exercise, the MDBA released the MDB Guide (followed later by the MDB Draft Plan and ultimately the MDBP). The 2010 Guide contained a provisional SDL but irrigators found it particularly unpalatable. They regarded that SDL as being too generous to the environment and too harsh on them. They strenuously objected to their level of take being

\textsuperscript{308} WA (2007) s 20(c).
\textsuperscript{309} Bret Walker, Murray Darling Basin Royal Commission Report (29 January 2019) 20 <https://www.mdbrc.sa.gov.au/sites/default/files/murray-darling-basin-royal-commission-report.pdf?v=1548898371> accessed 23 October 2019. (Walker Report); See also MDBP s 21. Note ESLT is defined in MDBP s 4(1). SDLs are ‘[t]he maximum long-term annual average quantities of water that can be taken, on a sustainable basis, from: (a) the Basin water resources as a whole; and (b) the water resources, or particular parts of the water resources, of each water resource plan area.’ (WA s 22, Item 6.) Accordingly, there is a Basin wide SDL and a SDL for each water resource.
\textsuperscript{311} WA s 23.
\textsuperscript{313} The MDBA was established under WA s 171.
\textsuperscript{314} WA s 41.
so limited and reacted vehemently, symbolically burning copies of the Guide outside a rural MDBA office.\footnote{Ray Ison and Philip Wallis, ‘Planning as Performance: The Murray-Darling Basin Plan’ in Daniel Connell and Rupert Quentin Grafton (eds), 
*Basin Futures: Water Reform in the Murray-Darling Basin* (ANU ePress 2011) 399–411 \(<\text{http://press-files.anu.edu.au/downloads/press/p115431/pdf/ch25.pdf}>\) accessed 9 July 2019.} Their protest attracted nation-wide attention. It captured an element of disdain for the MDBP that is arguably reflected in the acts of water theft which have later followed.\footnote{That dissatisfaction with the MDBP continues may be seen in the ‘Can the Plan’s’ blockade of the Australian parliament in 2019. Later in that year, a deal was reportedly struck between the Australian government and ‘Can the Plan’ protesters, who were seeking a revised Plan that gave less water to the environment and more to others, including irrigators and farmers; Cath Sullivan and Clint Jasper, “‘Can the Plan’ Protesters Say They Have Brokered a Deal with Federal Water Minister and Mike Keelty’ (ABC News, 3 December 2019) \(<\text{https://www.abc.net.au/news/rural/2019-12-03/protesting-irrigators-say-water-sharing-to-be-reviewed/11759388}>\) accessed 26 December 2019.}

Eventually, the MDBA succumbed under pressure from irrigators and adjusted the SDL down, meaning that less water had to stay in the MDB to benefit the environment (and consequently more could be taken out). Ultimately, the MDBA assessed the total surface water SDL for the Basin at 10,873 gigalitres and in order to meet that level of take, the MDBA concluded 2,750 gigalitres per year would need to be recovered from the baseline diversion level.\footnote{See Justice Nicola Pain, ‘Administering Water Policy in the Eastern States of Australia — Administrative and Other Challenges’ (AIAL National Administrative Law Conference, Canberra, 18-19 July 2019) \(<\text{http://www.lec.justice.nsw.gov.au/Documents/Speeches%20and%20Papers/PainJ/Pain%20-%20Administering%20Water%20Policy%20in%20the%20Eastern%20States%20of%20Australia%20-%20Administrative%20and%20Other%20Challenges.pdf}>\) accessed 13 December 2019; Murray-Darling Basin Authority, ‘Discover Surface Water’ (Australian Government) \(<\text{https://www.mdba.gov.au/discover-basin/water/discover-surface-water}>\) accessed 24 October 2019.}

How the revised SDL of 2,750 gigalitres was actually arrived at is problematic and is arguably linked to the same irrigator dissatisfaction that drives a disregard for compliance; a disregard that potentially sounds in water theft. In setting the SDL recovery, the MDBA should have taken into account the best available science but according to the South Australian Royal Commission Report on the Murray Darling Basin (Walker Report), it did not.\footnote{Bret Walker, *Murray Darling Basin Royal Commission Report* (29 January 2019) 219 \(<\text{https://www.mdbrc.sa.gov.au/sites/default/files/murray-darling-basin-royal-commission-report.pdf?v=1548898371}>\) accessed 23 October 2019 (Walker Report).} The MDBA did not, for example, rely on projections that factored in climate change, although the Commonwealth’s key research agency, the Commonwealth Scientific Investigation and Research Organisation (CSIRO) had undertaken, and made available, useful research on climate change.\footnote{Bret Walker, *Murray Darling Basin Royal Commission Report* (29 January 2019) 55 \(<\text{https://www.mdbrc.sa.gov.au/sites/default/files/murray-darling-basin-royal-commission-report.pdf?v=1548898371}>\) accessed 23 October 2019 (Walker Report).} Further, the Walker Report concluded that the SDL was arrived at by ‘political compromise’, meaning that it was arrived at in an unlawful manner (a manner not pursuant to the requirements...
of the WA) and in so doing it ‘risks compromising the key environmental priorities prescribed in the WA’. 320

Theft, SDLs and unauthorised water take
Awareness that more has to be done with less water has put significant pressure on irrigators but the inescapable reality is that it is impossible to improve ecological health without some pain. 321 A ‘legislated national program of reduced water for irrigation’ 322 has been passed and as a consequence, it has been noted that there may be ‘grievous’ effects on ‘pre-existing or planned private enterprises’. 323 However, this is no reason to cut back the legislated irrigated water use reduction program or tolerate its circumvention through water theft. In fact, causing the national program to ‘falter or halt’ ‘in the face of demonstrated consequences of reduced water for irrigation’ ‘would be against the central requirements of the Water Act’. 324 As Walker reminds us ‘[a]s enacted law, the solemn and binding expression of our [i.e. Australians’] democratic will was (and remains), that we have taken too much and must stop doing so’. 326 Put another way, accessing water by the ‘back door’ (that is, by stealing it), runs counter to our democratic will, as captured in the WA.

<http://agriculture.gov.au/water/mdb/basin-plan> accessed 1 July 2019, where it is noted that ‘The Commonwealth Minister for Agriculture … granted extensions for various proposed plans to be given to the MDBA by 31 December 2019’.


325 in the form of the Water Act 2007 (Cth) (WA).

Yet, against this backdrop, some irrigators have taken water outside or beyond the legal and regulatory systems designed to reduce water take and in turn, consumption. Their conduct flies in the face of, or flouts serious (even if not always effective) attempts to govern water resources in an equitable and sustainable manner. Their conduct may also potentially contribute to environmental harm and threaten ecological integrity.

Having said this, it is, however, worth taking irrigators’ concerns and grievances seriously. Understanding (but not necessarily agreeing with) their concerns may lead to better water governance. Many irrigators see SDLs as highly contentious and have, since their introduction, resisted their own (irrigators’) level of take being reduced by such mechanisms. Accordingly, SDLs have engendered much disquiet and, in some cases, anger. One irrigator lobby group, Can the Plan, expressed its anger by blocking the Australian parliament in December 2019. The group claimed that communities and livelihoods were suffering because the MDBP returns too much water to the environment (particularly, during periods of drought) and does not allow irrigators enough water to grow food and effectively run their businesses. Appreciating that anger and irrigator resistance to SDLs (particularly the specific gigalitre limits), WAL conditions and other restrictions, may assist in understanding (but not justifying) motivations for water theft; motivations which are likely to be, in the language of Arlie Hochschild, part of irrigators’ “deep story”; [part of their]… narrative as felt and with which good governance may need to deal. We return to Hochshild’s thesis later but for the present, we shift focus to the cases of two irrigators, who were prosecuted for water offences (offences that come under the broad category of water theft).

The Barlow and Harris Cases

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Water Offences

As observed above, the legislative schemes across the Basin states differ but Pain J has noted ex-curially, all, nevertheless, ‘broadly provide that it is an offence: to take water’ without authorisation and in contravention of licence conditions to use water without relevant approvals and to construct water-related works without approval. The different schemes also include offences relating to water metering, such as meter tampering.

The unauthorised take of water, which constitutes an offence, has been dubbed ‘water theft’. It is, however, conceded that water theft may be different from traditional property theft. In so being, it reflects the criminal law’s capacity to adapt and change, including its capacity to embrace regulatory crime.

Water theft allegations

The issue of MDB water theft or unauthorised water take came to public attention when, in July 2017, the respected current affairs television program, Four Corners (in an investigation called Pumped), aired allegations of possible water theft. Some irrigators were thought to have taken water to which they were not entitled under their WALS and associated governance instruments. Public reaction to the allegations was swift. Even if people were not greatly concerned about the environment, they did not like a thief. Interest in the subject was fuelled by concerns that the MDBA may have known of the allegations approximately a year before Four Corners went to air but did not exercise its substantial compliance and enforcement powers, in any serious way.

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332 Water Act 1989 (Vic) s 33E; Water Management Act 2000 (NSW) s 60A; Water Act 2000 (Qld) s 808; Natural Resources Management Act 2004 (SA) s 127(1), (6); Water Resources Act 2007 (ACT) s 77A.

333 Water Act 1989 (Vic) s 64AF; Water Management Act 2000 (NSW) s 60B; Water Resources Act 2007 (ACT) ss 28, 77A.

334 Water Act 1989 (Vic) s 64J; Water Management Act 2000 (NSW) s 91A.

335 Water Act 1989 (Vic) s 64J; Water Management Act 2000 (NSW) s 91A.

336 Water Act 1989 (Vic) s 64J; Water Management Act 2000 (NSW) s 91A.


In 2016, the MDBA was purportedly made aware of illegal irrigator activity, by way of its own monitoring investigation.\textsuperscript{341} Sources have reported that the satellite monitoring program, Data Cube, used by the MDBA and designed to scientifically track the effects of environmental flows on the rivers and wetlands, had revealed that water purchased by tax payers, for the environment, was being taken from the river system in one small part of the Barwon River, before it reached the downstream gauge.\textsuperscript{342} In other words, it was claimed that water was being taken in an unauthorised manner. At least one of properties in the relevant area allegedly found to be using large volumes of water was Rumleigh. Rumleigh, owned by Peter and Jane Harris, was mentioned in the Four Corners program\textsuperscript{343} as possibly being part of a water theft scandal.\textsuperscript{344}

In light of the allegations about the MDBA’s knowledge of possible water theft, it was perhaps unfortunate that the MDBA was asked, by the then Prime Minister, to review NSW’s compliance with the MDBP.\textsuperscript{345}

Meanwhile, at the state level, the NSW government responded to the Four Corners’ allegations by commissioning a different report, the Matthews’ Report. Matthews, the respected, former head of the National Water Commission found NSW’s water compliance and enforcement were ‘ineffectual and require[d] significant and urgent


improvement.’ He also found that metering, monitoring and measurements of water extraction in the Barwon-Darling system were below standard. Accordingly, water could be readily stolen because there were inadequate records being kept on abstractions. He, therefore, recommended a ‘no metering, no pumping’ rule and suggested a ‘systemic fix’ that included setting up a Natural Resources Access Regulator separate from the relevant government department. He also recommended, ‘enabling the public to readily access from a single source all details of individuals’ water entitlements, licence conditions, meter readings, water account balances and trading activities.’ Many, but not all, of these recommendations were implemented.

Matthews observed that alleged cases of water theft had remained unresolved for far too long and concluded that ‘the [water] industry’s “social licence to irrigate” [was] at stake’, so ‘acknowledging a social and ethical dimension (not just a legal one) to the issue of water sharing and allocation’. The NSW parliament responded to the Four

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Corners program and Matthews’ criticisms and recommendations by passing a water law reform bill in June, 2018 that, among other things, increased the maximum penalty for water theft to five million dollars for a company and $500,000 for an individual.356

**Harris case**

One of those slow-to-be resolved cases, referred to above, was that of Peter and Jane Harris, whose activities had been mentioned in the Four Corners program. The Harrises were irrigators who held a WAL but, who, in 2014-2015, allegedly pumped, five times more so called A Class water (the most valued class of water that can be pumped during periods of low river flows) than their WAL permitted. Then, in 2015-2016, those same irrigators, who were permitted to abstract B class medium flow water on 30 June only, allegedly abstracted 3,147 billion litres before that date, according to NSW data obtained by the NSW Environmental Defenders’ Office (NSW) (EDO) under Freedom of Information laws.357 The WMA s 60 makes contravening the terms and conditions of a WAL, an offence.

It also came to light in civil proceedings brought by the EDO, when seeking the release of Peter Harris’s water usage data, that the head of WaterNSW (the state regulator at the time) wrote to Harris stating that he was ‘sympathetic with submissions’ by Harris to protect his water usage data and that the regulator was ‘actively exploring’ ways, including via amendments to the Government Information Public Access Act, to protect water users’ data.358

In the criminal case *WaterNSW v Harris*, the Harrises pleaded not guilty to two charges of breaching a condition of a water supply works and a water use approval. Such breaches are an offence under WMA s 91(G)(2). At the time of writing judgement has been reserved before Robson J. In May 2019 new non-metering charges were also laid in relation to a different property. These charges relate to two counts of taking water when the metering equipment was broken.359

As there is no judgement as yet in the Harrises’ case, it is impossible to analyse reasons for the court’s decision but what is significant about this case and Barlow’s case too, is the lack of will, on the part of the regulator, to prosecute. If criminal sanctions are to have an impact, they will be dependent on enforcement of the law (in this case legislative provisions). They will also need to rely on reliable, diligent and effective monitoring which includes metering, so that there is robust evidence to support prosecutions.

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356 *Water Management Amendment Act 2018 No 31 (NSW).*
359 The breaches are alleged to have occurred on 6 and 8 August, 2015 at a property called, Mercadool, near Walgett. The charges relate to (a) pumps measuring engine running time and (b) flow.
Yet, very often the standard of metering itself is a somewhat neglected issue, receiving little attention. More commonly discussion focuses on whether there is metering at all, but the integrity of pumps and meters is critical, too. Anecdotally it is also said that even where tele-metering exists it may already be inadequate and outmoded because it runs on 2G rather than 4G or 5G.\textsuperscript{360} Such issues raise related concerns about the cost of funding effective monitoring (and who should fund it) and they highlight the bigger question: if enforcement through criminal sanctions is dependent on compliance, which is in turn dependent on obsolete, or outmoded monitoring technologies, how effective are the sanctions likely to be?

**Barlow’s case**

Barlow’s case is the other water theft case that was prosecuted following the *Four Corners’* program. Anthony Barlow, was the occupier and manager of a property that bordered the Barwon River, in the MDB. His parents held the property under a perpetual lease. They also held a WAL,\textsuperscript{361} a water supply works\textsuperscript{362} and a water use approval. Clearly, all abstractions needed to be compliant with these and any additional instruments in force at the time.

However, it was alleged that Barlow instructed an employee to operate the relevant pump (a MACE Agri-Flo Series 3 Meter) on two occasions in 2015; one between 16-18 May, 2015 and another on 29 May- 2 June, 2015. On both sets of dates an embargo on water abstractions was in place. The embargo was imposed by Temporary Water Restrictions Order Upper Darling Basin, 2014 (No 2) made under s 324 of the WMA. The conduct constituted a breach of s 336C(1) WMA, the maximum penalty for which was $247,500 for an individual. Additionally, it was alleged that the water take was not measured properly because the meter was broken; conduct which constituted a breach of s91l(2) of the WMA.\textsuperscript{363} Initially, Barlow pleaded not guilty but ultimately changed his plea to that of guilty.


\textsuperscript{361} The WAL (no 3368) was an Unregulated River B Class Access Licence that authorised water take from the Barwon River, a watercourse within the Barwon-Darling Unregulated River Source. The water source is defined in the Barwon-Darling Unregulated and Alluvial Water Sources 2012. Note an unregulated river is one that does not have major storage facilities such as dams, weirs or connecting rivers that do not release water downstream.

\textsuperscript{362} A works approvals covers equipment such as pumps that draw water from the river into irrigation channels. Water that is not needed at the time of abstraction is often stored in dams.

\textsuperscript{363} WaterNSW v Barlow [2019] NSWLEC 30
He was sentenced in 2019\textsuperscript{364} for taking water when an embargo had been imposed\textsuperscript{365} and for taking water by way of two pumps both of which had broken meters. The penalty handed down was $189,491.00 plus the prosecutor’s costs.

Preston CJ was required to take into account the objective seriousness of the offence and the subjective circumstances of the offender, both standard sentencing requirements. In relation to environmental offences, the former may be illuminated by the nature of the statutory provision of which there has been contravention as well as that provision’s place in the legislation as a whole.\textsuperscript{366} Consideration of the statute’s objects assists in this task.

The \textit{WMA}’s objects embed the concept of ecologically sustainable development in that statute,\textsuperscript{367} a concept which, in turn, may include the principles of inter-generational equity, the precautionary principle, improved valuation pricing and incentive mechanisms, and the conservation of biological integrity and ecological integrity.\textsuperscript{368} One of the key ways the \textit{WMA} seeks to fulfil these principles is by regulating (a) water abstractions and (b) water use (outlined above in the sections on reducing consumption). Barlow’s conduct infringed such regulation and the principles outlined above, constituting an offence.

However, Preston CJ found Barlow’s crime (like most crimes) did not warrant the maximum penalty (reserved for the worst examples of the offence) for a number of reasons, including that Barlow received no financial gain as the volume of water he took was still within his water allocation. His Honour also found the embargo-breaching offence was not at the high end of harmful because downstream holders’ rights were not affected and no environmental harm was caused or likely to be caused, by the offending abstraction, even though the abstraction occurred during a period of water shortage, in the town of Broken Hill. Further, His Honour applied a discount for the remorse Barlow demonstrated by way of offering reparation (the return of the water or the water being taken off his account).

While Preston CJ meticulously applied the relevant legislation (including the \textit{WMA}, the \textit{Crimes (Sentencing Procedure) Act 1999} (NSW) and the \textit{Criminal Procedure Act 1986} (NSW)) the sentence highlights the advantage of socio-economic status, in that Barlow was in the position to be able to offer to repay the ‘stolen’ water and is, consequently rewarded in

\begin{footnotesize}
\begin{enumerate}
\item There was some evidence that the Water Minister had mistakenly advised irrigators informally at a local meeting that the embargo had been lifted. Embargoes are, however, only lifted by formal notification.
\item WaterNSW v Barlow [2019] NSWLEC 30, [17].
\item \textit{WMA 2000 (NSW) s 3}; Ecologically sustainable development is also embedded in the \textit{WMA} through its provisions under Pt 1, Ch 7 permitting the Minister to impose embargoes.
\item These principles of ecologically sustainable development are described in \textit{Protection of the Environment Administration Act 1991} (NSW).
\end{enumerate}
\end{footnotesize}
sentencing for his remorse, remorse demonstrated through his willingness to make amends. Clearly, the idea of reparation, recompense and restitution is, generally speaking, a good one. It helps mitigate the victim’s loss and/or harm. However, more impoverished offenders than Barlow may not be in the position to repay what they have stolen. Those who are unemployed, homeless and hungry for example, or farmers in severe debt, are unlikely to be in the position to repay what is stolen and consequently, will not receive similar sentencing reductions.

Barlow’s case also serves to highlight how, without effective monitoring (especially through appropriate metering), unauthorised abstractions may potentially go un-noticed for long periods. Indeed, weak monitoring, compliance and enforcement may actually even indirectly incentivise water crimes. If offenders do not fear being apprehended, they may be more likely to commit the crime; a proposition arguably supported by the criminological literature that concludes that the likelihood of being caught is the primary deterrent and that the severity of the sentence has no deterrent effect.369 Hence, effective monitoring may serve to increase the likelihood of being caught and thus may deter commission of the offence.

More specifically, unauthorised water abstractions (that come under the term ‘theft’) undermine key tenets of the WMA. That Act relies on WALs operating in conjunction with water sharing plans and water markets to support ecologically sustainable development. If the established mode of regulation, including the licensing system and the related system of water trading are circumvented by people who steal (and take more or different water than that to which they are entitled), it is likely not only to lead to market distortions but also allegations of unfairness from other water rights’ holders who ‘play fair’. Systems of water allocation such as those in NSW, where there is reliance on licences, water plans, trading and SDLs are dependent on everyone playing by ‘the rules of the game’.370

Further, if would-be offenders think that their unauthorised take is likely to go unnoticed, copy-cat conduct may result, potentially contributing to additional free-riders. Additionally, where unauthorised abstractions exceed the taker’s actual entitlement, there will be less water available for others (including the environment), making water theft both serious and reprehensible.371 Such unauthorised (non-compliant) behaviour is also likely to compromise the realisation of ecological integrity, in part because ecological integrity depends on holistic environmental management that takes into account a range of planetary interconnections and relationships (such as those between water, water users, land and food, for example).372 When those interconnections and relationships are

371 This may be otherwise if water were bountiful but in the MDB, in 2019-2020, it is not.
ignored or down-played in favour of privileging individual gain (such as the thief’s individual advantage) it will be harder to maintain or restore ecological integrity. One way in which those interconnections are often dealt with (and ecological integrity supported) is by reference to an over-arching philosophical frame, such as the common good, where competing interests may be mediated. It is beyond the scope of this article to examine the concept of the common good but suffice it to say, that the common good and related concepts such as the public interest and the common heritage of humankind resonate with many justifications for criminalisation.

A lack of economic, political or other will – practical examples

At this point, however, it should be noted that despite the NSW trend towards criminalisation, water theft prosecutions such as those in the Harris and Barlow cases have been fairly rare. A long history of unmetered pumping left open opportunities for unauthorised pumping and historically resulted in few prosecutions. There was little will to enforce compliance, a position partly explained by the difficulty of gathering evidence for such prosecutions. Indeed, until recently, monitoring and compliance in relation to (unauthorised) pumping, were held in so little regard that there were: insufficient numbers of inspectors driving the vast network of NSW roads to check on water abstractions, diversions and use; inadequate inspectoral training; a significant number of unlicensed bores and as noted above, unsatisfactory metering equipment.

In terms of inspectors, the Strategic Investigation Unit (SIU) within the Department of Primary Industry and Water (DPIW) was downsized from its original staff of 12 officers to six in the months just before that department was split in 2016, to create WaterNSW (handling service delivery to water users and compliance actions) and DPI Water (handling water policy development). This staff cut rendered the SIU ‘ineffectual’. The situation was exacerbated when only four officers were later transferred to WaterNSW. ‘Compliance enforcement plummeted over this period, falling from 620 actions a year to just 200 in 2016-17.’ One farmer, who has run cotton farms in the Bourke region for 25 years, conceded that over the past decade inspectors visiting farmers had ‘become very...
rare’ and the issue of transparency and compliance was a serious one.377 Another former grazier claimed to have alerted authorities for years about unapproved works diverting water without a licence, for use on farmland.378 These cases represent examples of where regulators decided not to intervene and accordingly serve to highlight Gunningham’s point that ‘where’ and ‘how’ to intervene in the regulatory field, are key challenges.379

That regulators such as WaterNSW were simply not competent may be seen in many ways. For example, the NSW Ombudsman’s 2018 ‘correction’ report reinforces the narrative of regulatory neglect and sloppiness. It reveals how WaterNSW inadvertently gave the Ombudsman grossly inflated figures on the number of enforcement actions that had been taken.380 The consequent, necessary amendments to the Ombudsman’s Report did little to build confidence in the regulator. That the regulator was also actively investigating ways to block water users’ data from reaching the public domain, is also problematic (referred to above). It reveals a lack of transparency in water management – the opposite of what the Matthews Report went on to recommend and the opposite of what the MDB Commissioner (a former Federal Police Commissioner) has advocated, in relation to undeclared (non-transparent) conflicts of interest among politicians, lobby groups, and businesses operating in the water market. (See below.) Indeed, the Commissioner has commented ‘you could draw the conclusion that if conflicts of interest [in relation to water licences and water buy-backs, for example] aren’t transparent it could lead to corruption….Water is now the value of gold’.381 In this context, he argues for the proceeds of crime legislation to apply to water offences, meaning that water offenders may potentially lose farming property, for example.382

The conduct of WaterNSW (the regulator) also arguably provides an example of regulatory capture, a phenomenon which not only militates against the effective and unbiased operation of water governance but one which goes to the very heart of

confidence in the regulatory system and its ability to effectively collect and assemble the necessary data to support prosecutions.\(^{383}\) When NSW’s former chief investigator responsible for water law enforcement stated, ‘[i]t was clear to me that not just one property was involved [in unauthorised use], that there was basically an entire river system that was seriously lacking accountability, and compliance with the water legislation of [NSW]’\(^{384}\) it suggests that something was or is seriously wrong with the regulator’s performance, undermining the effect of criminal justice sanctions.

Although NSW has now passed a raft of water law amendments including those that increase penalties, penalty levels can be largely symbolic without proper/rigorous enforcement of relevant water statutes criminalising water theft. At the risk of repetition, penalties simply don’t come into play if offenders are not prosecuted because there is insufficient or inadequate investigation and evidence to support prosecution.

If regulators (and government departments) have little or no appetite for prosecuting, as the Four Corners program and the Matthews Report revealed was the case, water crimes, although ‘on the books’, remain merely symbolic. Whether it be a lack of will or a lack of finance that deters regulators from prosecuting, the result is the same. Legislation enshrining water crimes becomes a tool that helps establish the political legitimacy of governments, but it does little else. In such circumstances, criminalisation may be used to demonstrate that a government is doing something – taking an issue seriously – when in fact, it is not. Consequently, criminalisation becomes a strategy that enables government to make a pretence of earnestness, sincerity and pro-active conduct – suggesting that it is being ‘tough’ on water crime – when, in reality, there is little real conviction and commitment to reforming behaviours that play out unjustly on other members of the community and on the environment. Nevertheless, law and order politics, as an imaginary at least, remains popular at the ballot box.\(^{385}\)

**A change on the horizon? – more prosecutions**

There are, nevertheless, some suggestions that monitoring, compliance and enforcement are being taken more seriously than in the past. Justice Pain has noted ex-curialy some increases in water offence prosecutions. She observes that the NSW Land and

\(^{383}\) See Ombudsman’s words, ‘“Compliance and enforcement functions has been compromised by a deep cultural clash between a strong focus on customer service to water users on the one hand and the compliance and enforcement activities necessary to maintain the viability and integrity of the water market on the other” quoted in Alex Druce and Mike Foley, ‘NSW Water Spray from Ombudsman, Creates Headache for Niall Blair’ (FarmOnline, 15 November 2017) <https://www.farmonline.com.au/story/5059730/state-watchdogs-unexpected-spray-nsw-in-disarray/> accessed 22 August 2019.


Environment Court statistics, reveal that a number of proceedings were commenced in the period from July 2016 to July 2017. In particular, she notes ‘five class 5 (summary criminal enforcement) proceedings.’ Further, ‘between July 2017 and February, 2019…WaterNSW and the NRAR commenced 30 class 5 proceedings [demonstrating] a substantial increase. More broadly, 69 class 5 summonses were filed between June, 2009 and 2017 whilst 27 summonses were filed between 2018 and June 2019 (constituting 28 percent of all cases filed over the 10 year period).’ Additionally, in 2018 the NRAR received 70 percent more cases for investigation and finalised 80 per cent more cases while ‘five times as many allegations of unlawful water take’ were received.

However, despite these figures, in 2019 there are still some aspects of water management (including monitoring) that remain problematic and may or do impact on the issue of prosecutions being brought. The telemetering issue has been referred to above, while the weak measurement of flood plain harvesting (discussed in the Walker Report) which in Walker’s words, leaves floodplains ‘a virtually data-free zone’ in parts of the northern MDB (in Queensland and NSW) is another. According to the Australia Institute, the Northern Basin Commissioner’s First Annual Report reveals that many important issues remain to be explored. The Institute contends that Commissioner Keelty has not investigated the flood plain monitoring issue adequately. It also observes that ‘other claims of wrong-doing, which should have been investigated [but were not] by the [now] Inspector General for the Murray Darling Basin [Keelty], in the last year include: [a]lleged rorting of the Commonwealth’s $4 billion water efficiency program; [a]llegations that the Murray-Darling Basin Authority drained Menindee Lakes outside its operating rules; [g]rowth in floodplain harvesting and the process to issue floodplain harvesting licences; [and]… [q]uestionable water purchases and their links to politicians’. Clearly, several


of these issues potentially constitute criminal conduct. Other recent reports have also raised problems with MDB water management and compliance\textsuperscript{391} some of which also arguably have implications for issues of criminality.

To reiterate, without proper monitoring and investigation to provide the necessary evidence of legal and regulatory breaches, prosecutorial (enforcement) action is seriously hampered. In such circumstances, any potential deterrent effect from an increase in the likelihood of being detected or from increased penalties, is reduced.

**Why criminalise?**

Yet, even if the monitoring of unauthorised water abstractions improves, offenders are caught and prosecution rates rise, as Pain’s figures indicate may now be the case, we are left to ask whether criminalisation is the best tool to support effective water management? This raises the more general questions of why criminalise and what does criminalisation achieve? Or as Stanley Cohen put it:

‘Criminalization is a particular reaction to a defined social problem. The empirical question is, under what conditions do certain people consider that a given conflict requires state intervention, and if it does, should this intervention take the form of criminal justice (rather than another system, for example civil law)? The political question is why and how this preference becomes a reality. The pragmatic question is, what do we gain by defining the problem in terms of crime?’\textsuperscript{392}

The answers to these questions are complex and are central issues in criminology and penology, where the dangers of ‘overreach’\textsuperscript{393} or ‘overcriminalisation’\textsuperscript{394} have been highlighted since the 1960s. More recently, the emergence of green criminology has highlighted a range of ecologically and environmentally damaging and socially harmful activities that some scholars have argued should be criminalised.\textsuperscript{395} It would, therefore, be impossible to do these questions justice here but the following offers some brief responses.

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\textit{Darling Basin Plan: Volume 2 (Australia Institute, December 2019)}


\textsuperscript{392} Stanley Cohen, \textit{Against Criminology} (Transaction Publishers 2008) 267.


\textsuperscript{395} See Rob White (ed) \textit{Global Environmental Harm: Criminological Perspectives} (Willan Publishing 2010); Avi Brisman and Nigel South, \textit{Green Cultural Criminology: Constructions of Environmental Harm, Consumerism, and Resistance to Ecocide} (Routledge 2014); Rob White and Diane Heckenberg, \textit{Green Criminology: An Introduction to the Study of Environmental Harms} (Routledge 2014); Nigel South and Avi Brisman (eds), \textit{Routledge International Handbook of Green Criminology} (Routledge 2013).
Collective moral project

One key reason for criminalising certain behaviours is well set out by legal philosopher, Anthony Duff. Duff argues that criminalisation represents society collectively taking a stand against certain behaviours (and the outcomes that are likely to arise from those behaviours or acts).396 In criminalising, society is setting a moral position, affirming that something is ‘wrong’. Hence, criminalisation is a collective moral project. Applying this understanding to the water context, disdain for, and disapproval of unauthorised water take, might form the basis of a collective moral project positioning such conduct outside what society considers acceptable. In other words, stealing of an important, life-giving and highly valued resource, such as water might collectively be regarded as reprehensible and not to be condoned. However, because criminal law is not static, and is historically and culturally relative, collective moral projects may alter over time, place and circumstance. Hence, if water resources were to become plentiful, water theft may perhaps be decriminalised. Accordingly, circumstances such as drought and climate change, which impact on the volume of water available to be shared, and in turn, impact on the severity of the effects of water theft, ultimately may have a role to play in decisions about whether unauthorised water take should be criminalised. In other words, circumstances may exacerbate or ameliorate the degree of opprobrium engendered by conduct such as unauthorised water take, allowing unauthorised take to move in and out of criminalisation. Crime is, therefore, a fluid concept. Certain behaviours move between what is criminal and what is not, as, for example, is the case with certain public order offences including offensive behaviour,397 drug use,398 abortion399 and domestic violence, the last of which has moved from being regarded by police as primarily a personal and domestic problem to being characterised as a crime.400 Hence, in very water-rich jurisdictions such as Iceland or parts of Scandinavia, there may be little need to govern water take particularly stringently. Authorisation may not be necessary and criminalisation may be seen as less appropriate.

This ability to criminalise and decriminalise is largely possible because crime is socially and culturally based.401 Behaviours are not universally understood as crimes. (Hence, foreign visitors may sometimes offer as a defence, words such as, ‘this is not a crime in my country.’)402 Yet, there may be pressure to criminalise because from a political point of view criminalisation is relatively easily adjusted and modified compared with other modes of governance, such as ‘family, formal education, religion, the media, trade

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397 For example, swearing was once offensive behaviour whereas today, in many circumstances, it will not be so regarded.
399 For example, in 2019, in both Northern Ireland and NSW, abortion was decriminalised.
400 This is the case in Australia, for example. See David Brown and others, Criminal Laws (6th edn, Federation Press 2015) ch 7.6.
402 Indeed, even conduct such as rape in marriage or honour killings are acts that are considered ‘wrong’ in some jurisdictions but are condoned in others.
unions, professional, cultural and sporting associations, peer groups, social mores and increasingly the market, where people are consumers’. Formal alteration of laws that introduce or remove criminality is at ‘the behest of parliament’ and can be, and frequently is, conducted rapidly with minimal research or debate, in response to individual cases, scandals and media campaigns.

**Deterrent Value**

Another reason commonly proffered for criminalising certain conduct, is to deter future offenders (known as general deterrence) and the individual offender (known as specific deterrence). Deterrence is largely taken for granted, an article of faith, with little research evidence to support it. It is a simplistic notion based on the assumption, in relation to specific deterrence, that if offenders are caught and punished for breaching the code of behaviour on which society has collectively agreed, then those offenders will be unlikely to commit the offence again. They will learn their lesson and recidivism will be unlikely. As Brown and others put it:

‘…general deterrence depends on offenders knowing the law and knowing the likely penalties, engaging in rational calculations unaffected by anger, rage, passion, drug and alcohol abuse, and psychological disturbances of various kinds, and having a belief that they will be apprehended, prosecuted and convicted, to say nothing of a wide range of economic, social and cultural factors that provide the context within which various forms of offending occur.’

Moreover, recidivism rates in relation to the most severe sentence, imprisonment, invariably range in many jurisdictions around 50% (reoffending within a year of release, in the UK 48% for adults, 65% for children and 63% for those serving sentences of less than 12 months) and around two thirds of prisoners having served a previous term of imprisonment. So that, as noted above, the deterrent value of criminalisation is highly contestable, with the likelihood/fear of being caught, rather than the severity of the sentence itself, being the primary deterrent. As for the severity of the sentence, the spike in knife crimes in London in the face of the hefty sentences available for offences such as murder, manslaughter and grievous bodily harm, serves to demonstrate how tough sentences do not necessarily deter offenders, particularly those committing expressive crimes.

Returning to the water context, it might be argued that water theft is an example of a ‘rational’ offence where, unlike expressive offences such as assault and homicide, the sentence level may possibly act as a deterrent if the offending behaviour follows a plan of rational calculation that factors in the unlikelihood of being caught and the purely monetary nature of any penalty. However, this calculus does not seem to work in relation to Barlow’s embargo offence. Barlow attended a local meeting, where the then water Minister announced that the embargo on water abstractions had been lifted. This was incorrect because an embargo could only be lifted by way of gazettal. Relying on the Minister’s announcement, Barlow pumped water in breach of the embargo and consequently committed an offence. Although the Court found Barlow was reckless in committing the embargo offence, it is hard to imagine Barlow being deterred from future embargo breaches, when the fear of being caught arguably did not arise because Barlow did not avert his mind to the fact that he was committing an offence in the first place and further, he did not know that his metering equipment was seriously faulty.

In summary, the deterrent value of criminalisation becomes less convincing, the more the issue is unpacked. In the water context, whether criminalising unauthorised water take would be likely to deter future offenders in general or a specific offender, is largely uncertain, assumed rather than proven.

Punishment/ Retribution

Yet, another reason often used to justify criminalisation of certain conduct or acts is that criminalisation provides a mechanism for punishment. This argument relies on a *quid pro quo*. It suggests that if a person offends, then they deserve to be punished, invoking a just deserts philosophy. Such an argument is understandable and has some appeal, indeed from the 1980s onwards with the faltering of the rehabilitative ideal, retributivism and just deserts have become the dominant justification for punishment in Anglo-American jurisprudence and legal philosophy. There is a measure of fairness about the just deserts approach and, being ‘backward-looking’ and concerned only with culpability for the offence, it is unconcerned with potential forward-looking effects such as deterrence or rehabilitation. It is thus primarily a moral position that does not depend on empirical or research-based proof or justification, which perhaps enhances its appeal to some moral philosophers, some victims and the popular media.

Rehabilitation

Another, forward-looking argument is that of rehabilitation, that the application of criminal punishment may lead to positive, corrective behaviour. Rehabilitation is too

408 However, it is conceded that as water theft is a generic term, there may be some water offences falling under the term that may admit of such a classification. Nevertheless, the numbers are unlikely to be great.
409 Water NSW v Barlow [2019] NSWLEC 30, [63]
410 See Water NSW v Barlow [2019] NSWLEC 30, [63].
411 Water NSW v Barlow [2019] NSWLEC 30, [66].
413 For a comprehensive collection of articles on rehabilitation see, Pamela Ugwudike and others (eds), *The Routledge Companion to Rehabilitative Work in Criminal Justice* (Routledge2020).
complex a concept and process to adequately summarise here and any rehabilitative effect actually achieved depends largely on the quality of programs and supervision both inside and outside the prison, and on post release assistance in reintegration, rather than the simple fact of being subject to imprisonment or a community sanction. However, at a crude level, high recidivism figures call the practical achievement of both deterrence and rehabilitation, into question.

Criminalisation and its concomitant punishment, may give victims and the general public a sense of satisfaction (‘the offender got what was coming to him/her’) but whether that punishment has wider benefits for society is not well established. It may be that there are other non-criminal methods of punishment that are more effective in bringing offenders to a state of acknowledgement of wrongdoing and of remorse from where changed behaviours may be developed and emerge. It may also be that other non-criminal punishment involves fewer stigmas and consequently enhances the process of reintegration following guilty findings or guilty pleas. Although, the process of reintegration is likely to be more difficult following incarceration, even criminal punishment which involves financial penalties and the recording of a criminal offence (as is the case with water theft) means that offenders may find it difficult to secure work, find housing or take a loan, for example. If the intention is to reduce water theft (and perhaps other crimes, too), it will be important for those offenders to feel that they have a stake in the society in which they live. Their ‘buy-in’ may become a significant preventative tool but that tool will not be available if the ostracism associated with criminality cannot be readily shed.

Whilst sentencing matrices, minimum sentences and strict liability crimes, for example, may have superficial appeal and initially seem satisfying because they lead to quick, easy responses, ultimately, they may be found to be less effective and indeed counter-productive in various ways. Sentencing matrices and minimum sentences curtail judicial discretion and infringe the principle of individual justice, while strict liability, in removing mens rea as a requirement of establishing culpability, diminishes the moral force of conviction as a breach of collective mores. Further, society bears the cost of dealing with ex-criminals and the scars of retribution make re-integration harder, a point made forcefully by Braithwaite in his seminal work on the subject.414 In his critique of retributivism he argues for ‘reintegrative shaming’ rather than expulsion and exclusion.

Of course, shaming is a tool that may be used within the criminal justice system or outside it but it is important to this discussion because it challenges the efficacy of the just deserts approach to punishment and criminalisation. Reintegrative shaming calls on offenders’ feelings of shame to make them appreciate the impact of their actions and it encourages behaviours that are arguably likely to reduce re-offending.415

Arguing for criminalisation on the basis that it provides a vehicle for punishment also runs the risk of sentences becoming long, human rights being infringed by means of poor incarceration conditions, inadequate in-prison educational and rehabilitative programs

and insufficient post release support, and the expense of incarceration borne by the state escalating. At present this argument is, however, only theoretical in the water theft context because to date, in NSW, water theft does not involve the loss of liberty as a form of punishment, with fines being the standard penalty. If we are concerned to bring about or enhance an offender’s awareness of the moral wrongdoing against the community of water theft, then some forms of community service or corrections order involving the offender spending ‘X’ hours working with agencies such as the Environmental Defenders’ Office, local council or Indigenous organisations concerned with environmental protection, sustainability and river remediation, would arguably hold more promise than fines.

Problems with criminalisation

The above discussion on the rationale for criminalisation serves to highlight both criminalisation’s benefits and disadvantages, both generally and more specifically as they relate to aspects of water management. The discussion also reveals that criminal law, like many legal sub-disciplines will not necessarily provide quick, effective and desirable outcomes. It is a tool that works best when operating in tandem with other governance tools such as education, the media, family pressure and medical interventions. It is simply incapable of ‘fixing’ everything. Indeed, Brown et al state that ‘[c]riminal law is not the civilising cement which holds society together and prevents anti-social unleashing of egoism and plunder that ‘human nature’ would otherwise dictate.’

Yet, despite its failings and weaknesses, there is clearly still a potential role for criminal law. For example, going back to Duff’s point on a joint moral enterprise, criminal law may send the signal that in a hot, dry, water-poor country such as Australia, taking water to which one is not entitled is morally wrong and is conduct that society will not condone. On Duff’s account, criminalisation should involve identification of conduct as a public rather than private matter; ‘as implicating some part of the polity’s civil order, to which the polity therefore has in principle the standing to intervene’; the conduct is wrongful and the polity has ‘reason to call those who engaged in it to formal, public, censorial (and possibly punitive) account’. Further, having established all these conditions, it will then be necessary to consider whether there is good reason to criminalise the conduct in question, rather than responding in other ways, which involves an examination ‘of the practicalities of doing so’.

Tensions

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The water narrative above which, includes doctrinal law, aspects of the regulatory and governance framework for water abstractions and a review of criminalisation as a tool to address certain unacceptable water-related conduct, reveals several tensions. Those tensions include sharing versus selfishness, secrecy versus transparency, markets versus public administration and individualism versus the common good. Space does not permit consideration of them all. Hence, two have been selected in order to highlight some of the issues with which law and policy makers need to deal if better water governance is to be achieved.

Sharing v selfishness

The idea of sharing is captured in the objects of the WA and the MDBP, and specifically in the concept of SDLs. As discussed above, SDLs ultimately provide for limits on individual water abstractions, so that water (and the ecosystems associated with water) are protected for the whole community, both present and future. The SDL concept is dependent on understandings that promote a healthy ecosystem for all to share and enjoy. In this sense water is treated as fundamental to our common (shared) heritage. Yet, this notion of sharing often tends to rub up against notions of selfishness and individualism in the water context. Notions of selfishness and individualism are arguably embedded in calls for a triple bottom line (economic, political and environmental) approach to the interpretation of the WA’s requirement that the volume of consumptive water take be reduced. At first glance, the triple bottom line approach may seem balanced and reasonable, but the arguments in favour of it often disguise a lack of willingness by irrigators and others to alter plans for their own private enterprises; alterations which, if effectuated, would enhance water management because there would be fewer consumptive abstractions.

The arguments for a triple bottom line interpretation of the WA’s provisions commonly proceed on the basis that recovering less water for the environment is advantageous because it would benefit farming, which would in turn, benefit the economy and ultimately society as a whole. Yet, Walker has described attempts to interpret water recovery under the WA along these lines as ‘pernicious’, observing that the triple bottom line approach tends to reflect a lack of willingness to engage in water recovery as a joint enterprise, agreed democratically by the people and enshrined by parliament via its law making role. Instead, a proper interpretation of the WA would, according to Walker, privilege the environment over other factors such as the economy and politics. He observes the Act recognises that interests may be ‘harmed (at least financially)’ but the provisions that potentially cause such harm are important to the implementation of


the Act’s ‘cardinal feature, that less water will be taken than in the past – measured from an historical base line (in 2009’).

Hence, the triple bottom line approach, that initially may seem fair and balanced, potentially disguises (a) a lack of willingness to adapt to a new environmental order, (b) a proclivity for selfishness and (c) the pursuit of individual advantage. According to Walker, it is ‘hard not to travesty the argument’.

Irrigators highlighted personal or selfish interests in the symbolic burning of the 2010 MDB Guide referred to above and it would seem that the sentiments expressed in that symbolic act are still active. The 2019 blockade of Parliament House in Canberra, by the ‘Can the Plan’ lobby, embodies similar sentiments. That lobby demands a reduction in the volume of water to be returned to the environment, so that more water will be available to farmers, irrigators and others. Whilst it is possible to feel some sympathy for food growers whose livelihoods are affected by reduced consumptive water availability, if there is not a healthy river system into the future, all food production will be threatened. Hence, short term interests may need to yield in favour of long-term environmental objectives.

However, perhaps the most obvious example of selfishness and individualism is exemplified in the actual acts of unauthorised water take outlined above. Offenders such as Barlow, whose conduct Preston J categorised as reckless, demonstrate a lack of respect for sharing water resources with other water users and the environment. They place their own, individual needs and desires above those of the wider community, so inviting their crimes to be characterised as crimes against the commons.

Transparency v Secrecy
Transparency and secrecy also emerge as tensions in the water context. The Matthews Report revealed a culture of secrecy within regulatory institutions such as WaterNSW. Its most senior bureaucrat, Gavin Hanlon, for example, sought to support the Harrises’ attempt not to divulge their water take records and he was even willing to lobby for legislative change in that regard. The Four Corners program discussed above, also reported that Hanlon resisted requests by investigators in his department to approve a major operation intended to uncover who was stealing MDB water by siphoning off...
billions of litres without authorisation.427 (Hanlon resigned shortly after these and other allegations were aired.)

Had a culture of secrecy not prevailed, it is likely that the Harrises’ unauthorised take would have come to public attention sooner. It may also have been the case that greater transparency could have acted as a disincentive to crime in the first place. Arguably, however, the institutional secrecy of regulatory bodies helped foster criminal acts such as Barlow’s. The secrecy model was excoriated by the Matthews Report and its recommendations that called for greater transparency, particularly in regard to water records being stored in one place and in a readily accessible form. Further, the interim MDB Chief Inspector, Keelty’s investigation into conflicts of interest including those in relation to difficult-to-discover political donations to parties responsible for developing water policy and in relation to the links between politicians and companies associated with properties, where seemingly inflated prices have been furtively negotiated and paid by government for the buy-back of water licences for the environment428 also highlights this tension. While property owners may stand to benefit from secretly negotiated water buy back deals, the details of which are not debated in parliament, nor publicly available, the effectiveness of water policy aimed at restoring water to the environment is threatened. Secrecy may not only lead to nepotism and a lack of confidence in the system, but it may, in extreme cases, lead to corruption and crime. Effective water governance, therefore, needs to address this tension.

‘The deep story; the narrative as felt’ and the rationalist fallacy

If concern that the criminalisation of unauthorised abstractions is not leading to desired outcomes and that competing tensions have not been adequately resolved, it may be helpful to engage alternative or complementary approaches to the problem of water theft (and perhaps other water-related criminal activity, too). For example, instead of thinking about unacceptable behaviour as responding to rationality and logic, as some of the arguments on deterrence seek to do, it may be helpful to explore the idea that emotion plays a more significant role in accounting for, or explaining human conduct than law and governance has recognised to date. In other words, feelings may underpin conduct, guide actions and inform responses, more than present policies, regulation, and law and governance acknowledge.


Arlie Hochshild’s sociological immersion research (albeit in a very different context) may offer insights in this regard.429 Hochshild explores what she calls the ‘great paradox; that is why those on the American430 right support policies and laws that do not serve them well. Why do they act against their own interests? In employing a sociological, rather than political perspective, her work explores how the ructions, the great divide, in American society ‘feels’ to people on the right of politics. Her interest is, therefore, in the emotion that lays behind the politics.431

One of the many questions Hochschild poses resonates with the environmental concerns of this article. She asks why a particular man, whose home and community had been lost to a sinkhole caused by a lightly-regulated drilling company, would still reject regulation, including regulation for environmental protection?432 Why would this man and many others like him, be anti-big government and why is government seen as the enemy of community and individual economic advancement?

In exploring possible answers to these questions, it becomes clear how easy it is for those not sharing these views to be judgmental and attribute such views to a lack of intellect or understanding. If only the holders of these positions understood the rational effects of their positions, they would change their views and behaviour. But such an approach devalues the right’s responses and may even help entrench them. Taking such a judgmental approach does not support the development of empathy and ‘the collective capacity to hash things out’ on which ‘a healthy democracy depends.’433 Meanwhile, the preferred, rationalist approaches commonly employed to resolve environmental and other tensions, such as those in the water space, have done little to assist understandings of otherness. People continue to act in ways that challenge logic and rationality as the above discussion on the deterrent value of sentencing demonstrates. That irrigators might steal water and contribute to over-consumption rather than protect the interests of their children and grandchildren is yet another example of logic losing out. Rationality or logical understanding may not always be the predominant reasons guiding people’s behaviour.

Instead of a rationalist approach, Hochschild suggests that it is important to know the other’s ‘deep story; the narrative as felt’.434 Knowing how people ‘feel’ and getting into their skin (or shoes) may provide greater insights into grievances, motivations and behaviour. In turn, this knowledge may help open up alternative approaches to governance, including water governance.

Hochshild’s research revealed deep stories imbued with feelings of exclusion, marginalisation and extreme frustration that the traditional tool of social mobility, hard

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430 American here refers to the United States of America.
432 Arlie Russell Hochschild, *Strangers in Their Own Land* (The New York Press 2016) 5. This is the story of Mike Schaff.

work, no longer seemed effective. It no longer produced outcomes (such as home ownership and savings) that lead to feelings of security. The narrative as felt also revealed feelings of anger about others (particularly marginalised or minority groups) ‘cutting in line’ and gaining advantage over the right, displacing them. Yet, she found that, in reality, there is significant common ground between the left and the right on a number of issues. They each experience a sense of dissatisfaction, disenchantment and disenfranchisement and they do not think the other side understands them. An ‘empathy wall’ has grown up and it militates against finding that common ground.435

Hochschild’s ideas, foreign as they possibly are to many lawyers, legislators and policy makers, may have some relevance in the water theft context. Getting into the skin of the thief – knowing their deep story – may permit greater understanding (but not exculpation) of why water thieves steal, why they are prepared to ignore licence conditions, broken meters or embargoes and take water. Their deep story may, for example, reveal a genuine concern that compliance with the SDLs will cause irrigator thieves to lose their businesses, so leading to family and community breakdown, as well as possible physical and mental health issues. Hence, it may perhaps be deep-seated fear and desperation that lead to defiant, reckless and reproachable behaviour such as water theft. If that is so, reliance on a range of mechanisms beyond the criminal law may be useful in modifying that behaviour. For example, it may be helpful to offer free psychological counselling, a waiver of (public) school fees, subsidised or free school lunches to relieve financial pressure, limited term interest-free farm loans, anger management programs, enhanced on-farm allowances, petrol subsidies, food packages, accountancy support, career re-training, community-building activities or courses on alternative land uses. Allowing the thieves’ fears and grievances to be heard and genuinely appreciated, that is for the ‘empathy wall’ to be broken down, may be the first step in devising better (perhaps non-criminal) mechanisms to prevent or at least, reduce unacceptable water appropriation. However, this alternative or complementary approach will require open-mindedness along with a genuine interest in personal stories, an approach somewhat unfamiliar to many legislators, lawyers and policy makers. As Hochschild puts it:

‘We, on both sides wrongly imagine that empathy with the ‘other side brings an end to clearheaded analysis when in truth, it’s on the other side of that bridge that the most important analysis can begin’.436

Conclusion
As noted in the Introduction much discussion of environmental crimes is pitched at a macro level, whereas this article has focussed on the micro level of water theft, in a single jurisdiction. The aim has been to address a series of questions and issues around the desirability and adequacy of criminalisation as a tool of governance and social policy. It was hoped that such a focus would be more revealing of complexity, of context and of tensions of competing interests.

As Australia is an extremely dry country it is very important to limit and control water abstractions, particularly in that country’s food bowl, the MDB. If some people take water in an unauthorised manner (commonly known as water theft), their acts potentially impact unfavourably on other users and the environment.

Hence, a complex web of law and regulation has been developed with the aim of regulating water take, as the sections on ‘reducing consumption’ and SDLs, in particular, demonstrate. Against the established legal and regulatory backdrop governing water take, and in light of Australia’s harsh and dry conditions, water theft, may be seen as a serious act. It commonly reflects recklessness, defiance and a lack of respect for the governance tools that seek to share water equitably and sustainably among a broad community of users including the environment.

Although the Australian water theft story may not include the drama of water lords, water cartels and the violence of attacks on civil water systems, as is the case in some other jurisdictions, the particular geographical and hydrological conditions in Australia (where, for example precipitation is low and evaporation high) mean that the unauthorised take of this life-sustaining resource, is serious. Indeed, it reveals a narrative of selfishness, recklessness and, in terms of inter-generational equity, short-sightedness. That narrative was explored here by reference to the Four Corners program highlighting incidents of possible water theft, the Matthews Report (investigating some possible water theft incidents and regulatory ineptitude), the Walker Report (stressing the importance of SDLs) and the prosecutions of two irrigators, the Harrises and Barlow, for example. This article also considered how a lack of political and/or economic will to monitor effectively, combined with weak regulation, may impact on the capacity to prosecute successfully.

Criminalisation was discussed as a key governance tool in the area of unauthorised water take. Yet criminalisation revealed both strengths and weaknesses. They were discussed, as was the underlying question: why criminalise? A key consideration was whether criminalisation would lead to desired outcomes. The answer to that question remains uncertain, particularly in the water context. While on one hand, a fear of being caught may arguably deter some behaviours, leading for example, to a greater number of water users ‘play[ing] by the rules of the game’, it may also ‘erode trust between water agencies and users’. Further, where proper technological monitoring is prohibitive or otherwise

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impractical for example, building local, contextualised community-based bonds and trust, perhaps through Indigenous and/or environmental networks such as the EDO, may be what encourages compliant behaviour\textsuperscript{441} rather than the strict hand of the criminal law. The emerging water narrative exposed a number of tensions with which law, regulation and governance more generally will need to deal. If these tasks prove beyond the criminal law, it may be that alternative or complementary approaches are beneficial. Hence, it may, for example, be helpful to rely on civil as well as criminal sanctions and it may also be helpful to employ bolder approaches, such as Arlie Hochshild’s sociological immersion approach, which demands an understanding of others’ (in this case water thieves’) ‘deep story; the narrative as felt’.\textsuperscript{442} Understanding the emotions that drive water theft (getting into the skin of water thieves) may, in turn, open up fresh governance approaches that are less legalistic and more strategically fashioned to circumstance, context and desired outcomes.

It may also be that redressing the problem of water theft to some extent at least, involves re-shaping the way actual and potential offenders think about unauthorised water take and use, so that their activities are not characterised as ‘getting away with it’ or ‘out-smarting the system’ but rather as the acts of cheating by someone, who does not play fair. If offenders feel shameful or remorseful, as opposed to admired as larrikins or proud of their bold anti-authority exploits, we may see a reduction in water theft. In an ideal world such a re-envisioning of water theft, may also involve a re-conceptualisation of water resources themselves, so that water and nature more generally, are not seen as needing to be tamed, conquered and beaten\textsuperscript{443} but rather as part of the common heritage of humankind that is worthy of protection, so permitting enjoyment, not just for present users but also for future generations.\textsuperscript{444}
Wildlife in Peril: Can Environmental Courts Prevent Extinction?
By: Jordan A. Lesser

The degradation of global ecosystems has finally become newsworthy. From the climate crisis, frequent reports on severe global warming impacts from the International Panel on Climate Change (IPCC) with corresponding worldwide protests, studies indicating that bird populations have dropped by 29% in North America since 1970\textsuperscript{445}, and that African elephants lost nearly a third of their number over a period of only seven years\textsuperscript{446} have all been prominent recent news stories. Many are warning that the Earth is entering the “Sixth Great Extinction” in which up to one million species of animals and plants are faced with extinction\textsuperscript{447} Not, however, due to freak natural disasters, such as the asteroid impact believed to have wiped out the dinosaurs and 75% of the Earth’s life 66 million years ago, but due to a force that remains indubitably quixotic and pervasive: human activity.

Untangling the web of human-caused factors that can lead to species decline is complex, as it is clear that the global economy built upon fossil fuel use negatively impacts most every species, including ourselves. But reductions in wildlife populations are not only predicated on habitat loss, industrial activity, chemical use or other elements of human civilization known to contribute to species declines; many statutorily protected animals are illegally killed or captured due to the high value of their skins, teeth, horns, tusks, meat or any one of countless other body parts. Global trade in illegal wildlife and wildlife products trade has been estimated to be worth $7-$23 billion (USD) a year by the United Nations Environment Programme (UNEP).\textsuperscript{448} Environmental crimes as a whole, incorporating forest products, fisheries and illegal mining operations reach a staggering value of $91-231 billion dollars a year. To put in context, these valuations place environmental crimes close to the level of global drug trade, counterfeiting and human trafficking – and it is often these same international criminal syndicates that also engage in illegal wildlife products trade. The massive value of wildlife and the increasingly sophisticated syndicate operations undertaking poaching efforts often pose significant challenges for enforcement, accountability, and prevention in developing nations that lack adequate resources.

Wildlife poaching has devastated animal populations across the globe. A 2019 study indicates that, while not at its 2011 peak of 30,000 per year, 10-15,000 elephants are

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poached in Africa annually, threatening the 350,000 total population with virtual extinction in the coming decades.\textsuperscript{449} This population number has already declined by 97%, from 12 million African elephants, over the last century.\textsuperscript{450} Black rhinoceroses also face staggering declines in populations, now numbering under 5,000, with recent spikes in demand for rhino horn, used in traditional medicines and as a status symbol in China and Southeast Asia. The species remains extremely endangered, and the black rhino could be extirpated from Namibia (home to over 40% of the remaining animals) within ten years due to poaching,\textsuperscript{451} with reports indicating that the population has been reduced by 97.6% since 1960.\textsuperscript{452}

Since 1975, international law to prevent the loss of endangered species has been in force. Known as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 183 parties have joined this multilateral treaty, agreeing to varying levels of protection for over 35,000 plants and animals and the regulation of wildlife and wildlife products trade. Despite CITES promulgating norms of conduct and limiting trade of wildlife, effective implementation must occur at the national level in each member country, through domestic statute and effective enforcement. Yet to effectively mitigate the shocking losses of wildlife species in the face of new threats, legal and governmental reforms are needed in the countries at greatest risk to losing iconic wildlife species.

One such reform which is supported by international agreements, and, often, constitutional provisions in nations founded in modern times, is the creation of a specialized environmental court system. This paper will address the benefits and structures of various environmental courts in existence, trace the forces behind their development, and highlight their role in combating wildlife crimes, as well as the future of environmental courts across the globe.

I. \textbf{Multilateral Environmental Agreements create a baseline of principles to establish environmental judiciary}

Many international agreements lay out basic rationales to compel the creation of an environmental court, often through enshrining rights and creating a policy framework for environmental decision-making. One of the earliest global environmental initiatives was the 1992 U.N. Conference on Environment and Development, and the resulting “Rio Declaration” which states in principle 10 that:

“Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate


access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.”

Over 170 nations agreed to principle 10, marking the first time that a multinational accord recognized a public right to engage in environmental regulatory processes, including providing government-held information and the right to participate in government decision-making for individual or community benefit. Establishing such rights only creates a pillar of lawmaking and government administration, however, if a decision can be reviewed, if a wrong can be redressed, and if access to justice exists through an independent judiciary. These core tenets transcend environment and development concepts, instead offering a building block of modern governance structures essential to nations governed by the people (Democracy). The Rio Declaration, as non-binding international law, generates a series of important governmental and procedural norms to drive the implementation and development of environmental laws in nations across the world. Sustainable development, the precautionary principle, and other foundational cruxes of environmental law agreed to at the 1992 conference began to create new expectations and public awareness. Many countries have begun to implement specialized environmental courts, in adherence to principle 10.

A decade after the Rio Convention, and several years after the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention), the Global Judges Symposium held in Johannesburg, South Africa in 2002 advanced the international normalization of establishment of environmental courts at the national level in furtherance of emerging conservation-based processes and mechanisms. This Symposium was attended by 120 judges from across the world to develop a generalized framework for environmental law interpretation. Members of the global judiciary convened in order to solidify their role in providing positive outcomes for sustainable development and environmental protection, leading to the adoption of the “Johannesburg Principles on the Role of Law and Sustainable Development.” These principles pronounce a global order for the importance of the judiciary by stating: “[w]e affirm that an independent Judiciary and judicial process is vital for the implementation, development and enforcement of environmental law, and that members of the Judiciary, as well as those contributing to the judicial process at the national, regional and global levels, are crucial partners for promoting compliance with,
and the implementation and enforcement of, international and national environmental law."

Foundational concepts of environmental adjudication, established at the international level through Multilateral Environmental Agreements (MEAs), create norms and mechanisms for countries to implement. While cultural factors can shape the existence, the lack thereof, or the structure of a specialized court system, the environmental degradations that impact the public are often similar across the globe. Many face air pollution, water contamination, land use pressures, and are aware of the impacts of a changing climate, including vast losses of wildlife of nearly every type.

Many countries that have implemented or revised their constitution in the years following the Rio Declaration, often expressly include environmental rights for their citizens, folding them into long-established fundamental human rights. In these newer national constitutions, often in developing nations, the emergence of environmental law as a discrete field in the 1970’s was either concurrent with formation of a constitution, or had become an expected role of government with constitutional underpinnings. In this sense, environmental law was not conformed to the mold of an existing governmental framework, as seen in the United States and Western Europe, but rather could be ingrained as a foundational constitutional tenet either at a country’s birth (Namibia) or through significant structural reform (Kenya; India). With constitutional backing, Environmental Courts & Tribunals (ECTs) have a clear rationale for formation and can serve an important role in preventing environmental degradation, including wildlife poaching.

II. Constitutions promote creation of environmental courts

Since the environmental movement of the 1970’s, structures of governance, including constitutions, often expressly grant ecological rights, the right to a healthy environment or sustainable use of natural resources. Courts, in turn, may use these guarantees of broad rights to allow for rulings that resolve cases in ways that implement novel approaches to conflicts, or expand the scope of constitutional provisions to enhance a nation’s environmental regulation. The United Nations Special Rapporteur on Human Rights and the Environment has acknowledged the importance of the courts’ role in recognizing constitutional environmental rights, stating: “[w]hen applied by the judiciary, it has helped to provide a safety net to protect against gaps in statutory laws and created opportunities for better access to justice.” And the UN also notes an increase of “[c]ourts in many countries … increasingly applying the right, as is illustrated

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457 Domenico Amirante, Environmental Courts in Comparative Perspective: Preliminary Reflections of the National Green Tribunal of India, 29 Pace Envtl. L. Rev. 441 at 444 (2012).
by the interest in the regional judicial workshops held by the United Nations Environment Programme and the Special Rapporteur.\textsuperscript{459}

In a report on governmental “good practices” to ensure a healthy environment, the UN makes clear that “[g]ood practices relating to access to justice and effective remedies are often aimed at overcoming three major obstacles: standing to sue, economic barriers, and lack of judicial expertise in environmental matters… [i]n most States where the right to a safe, clean, healthy and sustainable environment is recognized in the Constitution, individuals and nongovernmental organizations have standing to bring lawsuits based on the violation of this right or of environmental laws.”\textsuperscript{460}

Vital to the effectiveness of an environmental court, as affirmed by these UN reports, is improved access to justice from an independent judiciary, first detailed in the Rio Declaration and the Aarhus Convention. An independent environmental judiciary is paramount in ensuring critical human and environmental rights, especially: “[w]hen access to justice and/or effective remedies are denied at the national level, regional courts, tribunals and committees can play an important role.”\textsuperscript{461} Countries, of course, take different approaches to how their environmental court systems function, leading to varying levels of success and degrees of reform.

A. Kenya

For example, one of the countries hardest hit by the poaching crisis, Kenya, finalized a new Constitution in 2010, requiring the creation of the Environment and Land Court (Kenya ELC). Amazingly, the Kenya ELC contains progressive environmental principles from the Rio Declaration and Johannesburg principles within its enabling statute:

In exercise of its jurisdiction under this Act, the Court shall be guided by the following principles—

(a) the principles of sustainable development, including;
   (i) the principle of public participation in the development of policies, plans, and processes for the management of the environment and land;
   (ii) the cultural and social principles traditionally applied by any community in Kenya for the management of the environment or natural resources insofar as the same are relevant and not inconsistent with any written law;
   (iii) the principle of international cooperation in the management of environmental resources shared by two or more states;
   (iv) the principles of intergenerational and intra-generational equity;
   (v) the polluter-pays principle; and
   (vi) the precautionary principle.\textsuperscript{462}

Kenya, with creation of this specialized ELC, effectively codified the baseline environmental mechanisms which the United Nations Environment Programme seeks to promulgate through MEAs as international environmental law and judicial norms. By

\textsuperscript{459} Id.


\textsuperscript{461} Id at 8.

including in statute the precautionary principle, polluter-pays principle, intergenerational equity, traditional cultural and social principles, and public participation in land and environmental management processes as the formative lens for the ELC to approach adjudication, Kenya is ensuring that these judicial officials will (ideally) have professional specialization to meet these requirements. The now decade-old court has strengthened the environmental rule of law and environmental justice, in accordance with its organic statute, by ruling in favor of good-faith public participation processes and establishing a duty for state agencies to make accessible all relevant information during environmental proceedings. The ability, or indeed the duty, of an environmental court to compel sustainable management of natural resources can reshape the approach for adjudication of wildlife crime and the wildlife products trade, enabling a long-term approach to ecological impacts that often occur over a timeframe that spans multiple generations.

Intergenerational, precautionary, and sustainable approaches to wildlife and environmental management can be effective precisely because they allow for a science-based and/or years-long remedy that transcends the push-pull of the rapid political cycle, which can foster shifting regulatory targets. Also, the codification of international cooperation for environmental resource management acknowledges that natural resource distribution rarely corresponds with political boundaries. In some locations, ECTs are established with geographic jurisdictions based on river basins and population pressures (Sweden) or indigenous communities (Canada), again reflecting that environmental needs and solutions do not always conform to the lines on a map.

Accordingly, an independent judiciary serves as a critical backstop in enforcing domestic environmental laws as well as integrating the human rights and environmental provisions of international agreements to ensure consistent application of these fundamental values.

**B. National Green Tribunal of India**

Also in 2010, India created a National Green Tribunal (NGT) – one of a growing list of developing nations that have empowered a specialized environmental court to deal with this complex area of jurisprudence, and ease access for the public to bring a complaint to address an environmental problem.

Rather than a full court, however, India put in place a tribunal, reflective of national characteristics and their particular legal system, as well as unique constitutional and administrative nuances. There can be wide variance, based on what is preferred in each country, for environmental courts to “range from fully developed, independent judicial branch bodies with highly trained staffs and large budgets all the way to simple,  

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466 Id.


468 Id.
underfunded village ECs that handle environmental cases one day a month with rotating judges.”

Similarly a tribunal may “range from complex administrative-branch bodies chaired by ex-Supreme Court justices, with law judges and science-economics-engineering PhDs, to local community land use planning boards with no law judges.”

The permissiveness of the Indian constitution in affirming principles of environmental protection gradually shifted since its first form, dating to independence from the British Empire in 1950 which lacked any environmental provisions, to amendments from 1976 requiring that “the State shall endeavor to protect and improve the environment and to safeguard the forests and wildlife of the country,” while also affirming a similar fundamental duty for each citizen “to protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures.” Following these constitutional amendments, and also based on the existing constitutional right to life and personal liberty, the Indian Supreme Court became enmeshed in environmental policy beyond the standard judicial role of interpretation and adjudication of law. Since about 1980 “the Court has laid down new principles to protect the environment, reinterpreted environmental laws, created new institutions and structures, and conferred additional powers on the existing ones through a series of illuminating directions and judgments.” It is striking for a court to use its authority in such an expansive manner, but the perception was that the judiciary: “far from being substitutes for legislative powers – provide authority to the environmental legislation through judicial enforcement and interpretation, ensuring consistency and stability to environmental framework.”

A former Chief Justice of the Supreme Court of India, B.N. Kirpal, remarked in 2002 that “it has frequently fallen to the judiciary to protect environmental interests, due to the sketchy input from the legislature and laxity on the part of the administration.” By 2009 the Indian Law Commission issued a report that called for creation of a National Green Tribunal, and a bill was introduced.

With decades of experience in environmental adjudication, the court system saw the need to recommend and, after some debate, establish this NGT through legislation. Here the creation of the tribunal was not a mandate upon the judiciary, nor seen as an affront to the sitting judges (as in the United States where the ideal of the generalist-but-still-expert court was influential in a 1970’s report by the Department of Justice recommending against establishing a dedicated environmental court), but instead it was requested by the court itself.

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470 Id.

471 India Const. art. 48 & art 51A(g) available at https://www.india.gov.in/my-government/constitution-india/constitution-india-full-text


476 Id at 461.
Environmental redress was undoubtedly becoming increasingly important in a country with a population increase from 361 million in 1950 to 1.339 billion today. It was also well understood that access to effective remedy was a fundamental element of the Rio Declaration and that any environmental laws on the books were worthless without a way for the public to engage with the courts. The tribunal’s organic statute made several novel judicial practices an essential part of the NGT. Based on decades of experience with environmental law at the Supreme Court, the tribunal is comprised of anywhere from 21 to 41 members, but they are split between judges who hold degrees in the sciences with relevant experience in environment and forestry, and technical experts with government or community organization experience in the environmental field.\footnote{The National Green Tribunal Act § 4, § 5.} The recognition of a need for technical expertise in adjudicating complex environmental cases is groundbreaking, and based on the experiences of the Supreme Court of India and reflected in case law from as long ago as 1986.\footnote{See M.C. Mehta v. Union of India and Shriram Foods and Fertilizer [1986(2) SCC 176]} Indeed, neighboring Bangladesh has identified weaknesses in their own environmental court structure which was “not designed to accommodate expert knowledge over environmental matters … [e]xpert knowledge is specially required for the determination of level of pollution which can constitute a violation of environmental law,” and laments that no specialized environmental law training is required for judges appointed to the Bangladesh environmental court system.\footnote{See Environmental Law of Bangladesh: Environmental Courts and Judicial Activism – Weaknesses of the Environmental Court § 7A:14} However the Indian system is not without criticism, as the scope of scientific expertise may be too narrowly focused on the engineering and technology fields, per the National Green Tribunal Act, despite the relevance of other disciplines in resolving complex environmental law cases.

Provisions detailing standing procedures identified several ways to trigger access to the NGT, providing for one of the most, if not the most, liberalized mechanisms for bringing a case to an ECT anywhere in the world. One can bring a suit when: “there is a direct violation of a specific statutory environmental obligation by a person by which (A) the community at large other than an individual or a group of individuals is affected or likely to be affected by the environmental consequences; (B) or the gravity of the damage to the environment or property is substantial; (C) or the damage to public health is broadly measurable.”\footnote{The National Green Tribunal Act § 2(m)(i).} Additionally, any person can bring a suit, without a lawyer, by sending an email or letter to the court, which enables those who lack economic resources to still seek justice through the rule of law.\footnote{Pring & Pring, Specialized Environmental Courts and Tribunals at the Confluence of Human Rights and the Environment, 11 Or. Rev. Int’l L. 301 at 323.} This approach clearly provides very easy access to the courts, to a degree that some might find too permissive,\footnote{Id.} yet ensuring no undue barriers limit environmental complaints may help address one of the root causes of wildlife poaching: corruption.\footnote{See UNITED NATIONS OFFICE ON DRUGS AND CRIME, World Wildlife Crime Report: Trafficking in protected species, (2016) <http://www.unodc.org/documents/data-and-analysis/wildlife/World_Wildlife_Crime_Report_2016_final.pdf> accessed 8 January 2020.}

Still, one critical caveat limits the ultimate effectiveness of the court. Each expressly
enumerated statute that defines the jurisdiction of the National Green Tribunal, often praised as a way to eliminate uncertainty about what is an “environmental matter” that should come before the tribunal, applies to only civil cases and not criminal offences. For this reason, to date, the Wildlife Act is not included in “Schedule 1,” detailing the tribunal’s jurisdiction, and wildlife crimes will not come before the Green Tribunal of India. This oversight seems ripe for citizen complaint through liberalized standing measures, or for the Supreme Court to remedy though an innovative ruling that compels a change to the tribunal’s structure.

A recent United Nations report confirmed, in an assessment of illegal trade in African Elephant ivory, that corruption of local, regional, national officials, including park rangers, customs officers, and other conservation specialists, is often fundamental to a successful flow of black-market goods. The risk of confiscation also drops significantly if the officials themselves are engaged in the scheme. Despite the influx of criminal syndicates and the corresponding rise in highly-advanced poaching techniques, this UN report indicates reliance on those with special access to endangered animals or authority within a nation’s bureaucracy to provide the simplest way to both obtain and reliably export wildlife products to meet demand. India is not immune to these pressures, and in 2016 four park employees were arrested for involvement in poaching endangered one-horned rhinos, and a forest ranger was arrested after police found illegal tiger skins and ivory in his house. All of these arrests were in the Kaziranga preserve in northeastern India where wildlife guards are authorized to use a shoot-to-kill policy on anyone they suspect of poaching. Records indicate that over sixty people have been killed there in nine years. With high risk to poachers in this preserve, syndicates may prefer to find a compromisable official to do the killing and collecting of wildlife products, under the cover of government legitimacy. Within India’s court system, allowing for simple filing of a case directly with the NGT combined with permissive standing, could serve as a critical way to combat wildlife poaching without reporting, for example, a suspected poaching within a protected area to other officials who may also be complicit.

C. South Africa

Not all environmental ECTs favored by the court system show the same institutional durability as in India, however. For example, an environmental court (SAEC) was established in the Western Cape Province in South Africa in 2003. The SAEC was originally established to combat wildlife crime, providing a forum to

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485 Id at 28.
486 Id.
488 Id.
489 Id.
prosecute abalone poachers who were damaging coastal marine parks. Upon its founding, the Minister of the Environment called the SAEC part of a “war on poaching syndicates” and indicated the government’s broader conservation initiative was resolutely “determined to break these syndicates destroying our country’s valuable resources.” Immediate success was realized with a first-year conviction rate of seventy percent for wildlife crimes cases, up from ten percent in prior years. Ultimately leading to its undoing, the SAEC (including a second court established in 2007) was created and implemented by the South African court system. However, without a legislative mandate for its establishment, the SAEC was subsequently shut down in the face of a growing unwillingness of the court administration to provide funding and facilities. The South African example shows great promise for achieving better outcomes in wildlife crimes cases, but also demonstrates that domestic law authorizing an environmental court is crucial to ensure a specialized ECT’s existence throughout the ebb and flow of domestic political and economic cycles. It also underscores the need to frame an effective environmental court, which ideally prevents degradation and theft of natural resources, as a mechanism to encourage sustainable development and a healthy environment that provides tourism, ecological and agricultural benefits. Securing a steady funding stream for a dedicated environmental court is simplified with a tacit understanding that effective adjudication is in the public, and national, interest.

III. Structural advantages of a specialized national environmental court

Several definitive studies based on a review of national environmental courts and tribunals have clarified what structural advantages a specialized judicial forum can provide. Specifically, a dedicated environmental court could be expected to provide the following systemic advantages: (1) expertise via specialized training and exclusive jurisdiction for expert environmental courts; (2) efficiency; (3) visibility (of environmental crimes and judgments); (4) reduced cost (rules and procedures could be adapted to lower costs); (5) greater uniformity in the application of laws and precedent; (6) standing could be more broadly defined to enhance access; (7) commitment to environmental justice; (8) government accountability (the court could provide oversight of executive and ministry policy); (9) prioritization; (10) creativity by using flexible rules of procedure and/or evidence; (11) alternative dispute resolution could be implemented; (12) issue integration (with respect to wildlife poaching and organized crime, many laws may be required for effective prosecution, outside the scope of traditional environmental management); (13) remedy integration; (14) public participation, with enhanced Internet-based information for reporting; (15) public confidence (the public could be more confident that wildlife crimes were being dealt with adequately); (16) problem-solving (a dedicated court could look at the issue of wildlife poaching broadly, to solve the problem through all appropriate legal means); and (17) effective judicial interpretation (through

492 Id.
493 Id.
494 See FAURE & DU PLESSIS
interpretation and rulings a dedicated court could give teeth to environmental laws and constitutional environmental provisions.\textsuperscript{495}

IV. **Mobile Environmental Courts: Bringing Justice to the Wilderness**

As a part of earlier research for a public interest law group, the author traveled to Namibia with a team of international lawyers in 2016 and 2017 to learn about their wildlife poaching crisis and develop a report in conjunction with local experts. One popular recommendation, presented before a workshop of 60 government officials and stakeholders, was to create an environmental court to better apply the rule of law to wildlife crimes in the face of increased criminal syndicate activity across the country. Namibia has the second lowest population density of any country (behind only Mongolia), and illegal poaching often happens in remote deserts and isolated communities far from administrative centers that would usually host a regional court. Accordingly, to hold a trial on environmental matters within a reasonable timeframe, justices would need to travel to various locations by establishing a mobile court.

Certain logistical issues arise with a mobile court that would need to be addressed, and are not challenges unique to the Namibian context. These issues include the schedule of the court, managing case flow, and organizing matters so that they are heard in a timely manner, but with geographic rotation. These are important considerations to ensure that a mobile court is effective and cases are processed in a timely manner. They are not, however, reasons to avoid implementing mobile courts. Indeed, mobile courts already exist in many countries and have had a substantial amount of success.

According to a report provided by the United Nations Development Programme (UNDP) about mobile courts in Sierra Leone, Democratic Republic of the Congo (DRC), and Somalia, along with pre-crisis courts in the Central African Republic, implementation of mobile courts has led to improvements in the rule of law and judicial efficacy.\textsuperscript{496} These successes include increased access to justice for remote communities, reducing the backlog of cases in the lower courts, and strengthening the role of the formal justice system in areas where traditional justice mechanisms are prevalent.\textsuperscript{497} In the DRC, the mobile courts have also served justice on defendants who thought that they were untouchable in the remote areas where they were carrying out their crimes.\textsuperscript{498} Each success has not come without challenges, however, and the UNDP report describes


\textsuperscript{497} Id.

significant complications to developing mobile courts across all three African countries: (1) sustainability and funding, (2) planning and logistical issues, and (3) lack of awareness of the legal process by users. 499 These limitations and concerns are prevalent across the developing world.

A. Sustainability and Funding

Funding and sustainability directly impact long-term viability. The mobile courts examined were all, to varying degrees, funded by international organizations, such as UNDP, rather than domestic governments. 500 Where high levels of funding were provided, donors often directed the courts to prioritize certain cases and the mobile courts were seen as unsustainable due to lack of funding certainty. Additionally, these outside benefactors could, at least in theory, exert undue influence and introduce a limit on the autonomy of any court excessively dependent upon international funding. 501 The courts seen as most sustainable were those where the government provided a separate budget to operate the courts, perhaps supported by a smaller amount of international donor funds. 502

While it would be desirable for international funds to contribute to establishing a Namibian environmental court and, specifically, to training the judges and special wildlife crimes prosecutors, it would be ideal for the Namibian government to allocate annual funds to the operations of the court in the same manner in which Namibia’s other courts are funded. Also, it should be made clear to donors, including in statute, that they do not have the authority to direct the court to prioritize certain cases or otherwise affect the operations of the court. This is important in order to maintain the independence of the judiciary and for long-term efficacy of the court.

B. Logistical and Planning Issues

The mobile courts reviewed in the UNDP report fell into one of two categories in terms of planning: (1) ad hoc court sessions where a court session could be requested by the parties or when the judiciary deemed it was needed; or (2) planned, timetabled sessions. 503 Although the ad hoc sessions, particularly in the DRC, proved useful in reducing the backlog of cases where they were most needed, they also tended to be costly and, ultimately, somewhat inefficient. 504 In addition, some defendants suffered from prolonged detention due to delays in the arrival of the mobile courts. 505

Courts that followed the second approach and scheduled a mobile sitting in advance had more success. 506 There are various ways to accomplish this logistically. For example, every year, Sierra Leone’s Chief Justice issued an order that specifies the locations and the schedule for the mobile high court. 507 Also in Sierra Leone, the mobile magistrate courts had more flexibility in selecting their locations and schedule to cover

499 See Rispo, supra note Error! Bookmark not defined., at 7, 11, 14-15, 18-21.
500 See id. at 6, 10, 16, 20; see also Maya, supra note Error! Bookmark not defined., at 34-36 (with endnote #4 delineating the major international foundations and governments that had helped fund mobile courts in the DRC).
502 See id.
503 Id. at 24-25.
504 See id. at 11, 20.
505 Id.
506 Id. at 24-25.
507 Id. at 6.
eight stations. This method provided more certainty to the circuit tour than in the other countries examined. A mobile court’s schedule could be set annually, biannually, or even quarterly based on the caseload need and population and geographic factors unique to each country. In Namibia, there could also be an option for a regional matter to be expedited in Windhoek or another particular regional center by petition if the issue were especially time-sensitive. This procedure could be used in any jurisdiction to ensure timely access to judicial remedy, in the spirit of the Rio Declaration.

C. Lack of Awareness of Legal Process

A third major issue identified in the three African countries described in the UNDP report was a lack of awareness of the legal process, which can hinder operation of the courts and reduce social integration of legal norms. In Sierra Leone, the absence of witnesses in court produced high levels of adjournment rates. It was reported that the courts often drew a large number of individuals who were interested in learning about court process but, in some areas, training programs were needed to successfully boost knowledge of legal procedures and rights. The same issue was found in Timor Leste, but there, efforts were made to run legal awareness initiatives simultaneously with the mobile court hearings. Running the sessions simultaneously proved to be “exceptionally challenging,” and eventually a separate project was set up for the legal awareness sessions.

A lack of awareness of the legal process, however, is not a problem that is unique to mobile courts but rather can adversely impact the judicial system as a whole. The specialized training that should be cultivated for an environmental court and special wildlife-crime prosecutors would help ensure that judges and prosecutors are adequately trained in such issues. Namibia, or any jurisdiction, may also consider a legal awareness initiative, particularly in the communities that have seen a significant amount of poaching and in which mobile courts would sit, to educate the public about these new courts and how they would work. Such educational outreach could take place in conjunction with educating citizens about any new changes to the wildlife-crime and environmental legislation that may be adopted, including stricter penalties, and could also have the effect of deterring wildlife crimes.

V. The Future of Environmental Courts
It is clear as we begin the 2020’s that global environmental consciousness is on the rise. Issues of justice related to climate change, pollution and waste, and yes, loss of biodiversity, among other interrelated ecosystem-wide concerns are featured repeatedly in major news outlets across the globe. Indeed, Time Magazine’s 2019 Person of the Year was sixteen-year-old climate change activist Greta Thunberg, further cementing environmentalism as a modern cause célèbre, and hinting at the burgeoning public demand for environmental protections.

Does this renewed interest in environmental redress, while often politically-focused, also embrace a heightened role for a “green” judiciary? An analysis completed for the United Nations Environment Programme indicates a recent “explosion” of specialized environmental courts and tribunals (ECTs), leading to a dramatic shift, and increased prominence of, environmental adjudication. Showing a swift growth in ECTs, from 350 worldwide in 2009, to over 1,200 ECTs in at least 44 countries by 2016, this proliferation is attributed to a rising public outcry.

“Calls for improved access to environmental justice, the environmental rule of law, sustainable development, a green economy and climate justice are being heard around the world. In response, policy makers, decision makers and other stakeholders – legislators, judges, administrative officials, business and civil society leaders – are responding by taking a hard look at their governance institutions and are creating new judicial and administrative bodies to improve access to justice and environmental governance. ECTs are increasingly being looked to as the logical solution to the existing barriers in traditional justice systems.”

With the rebirth of environmentalism as a top-tier issue for peoples across the globe, and recognition of the critical role that a specialized judiciary can play in protecting and empowering environmental protections, ecological benefits, and the human right to a healthy environment, it is clear that ECTs will be at the forefront of conservation

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520 Id at 1-2.

521 Id.
measures in the 21st century. As discussed, a strong court system, providing accountability and consistent rulings, can hold those who commit wildlife crimes accountable, and ideally, catalyze effective enforcement and give teeth to domestic environmental laws and implement the principles of international agreements, including preventative measures.

Humanity sits at the crux of unprecedented environmental degradation: The Sixth Great Extinction, climate change, waste and plastics disposal with a skyrocketing global population - these are challenges that must be confronted now, before any control over the outcome becomes merely an illusion. As John Muir reminds us to look beyond anthropocentrism: “[t]he world, we are told, was made especially for man – a presumption not supported by all the facts.”

"Unprecedented Development in Kerala and the associated risks to life"

By Dr. Dayana Maliyekkal

“Even a whole society, a nation, or even all simultaneously existing societies taken together, are not the owners of the globe. They are only its possessors, its usufructuaries, and like boni patres familias, they must hand it down to succeeding generations in an improved condition.”

Karl Marx’s Capital (Volume 3)

Introduction

Kerala is known as God’s own country all over the world due to the scenic beauty and the beautiful climate of the state. Its tourism industry attracts a lot of people. The famous Western Ghats which runs through many districts of the state and the three Ramsar sites (the protected wetlands) and many other features are praiseworthy. But in the past few decades the commercial interests of people have given way for much unprecedented (that has never happened or existed before) development\(^{523}\) and consequent environmental problems and pollution of the pristine purity of all the ecologically fragile\(^{524}\) areas. The vanishing paddy fields and wetlands\(^{525}\) for commercial buildings and house sites are some aspects of it.

Flood in 2018

In 2018 the state witnessed a great crisis due to severe flooding. The state experienced an abnormally high rainfall from 1 June 2018 to 19 August 2018. As per the data, Kerala received 2346.6 mm of rainfall from 1 June 2018 to 19 August 2018 in contrast to an expected 1649.5 mm of rainfall. This rainfall was about 42% above the normal. Further, the rainfall over Kerala during June, July and 1st to 19th of August was 15%, 18% and then 164% respectively, above normal rainfall for the period. Due to heavy rainfall\(^{526}\), the first onset of flooding occurred towards the end of July. A severe spell of rainfall was experienced in several places on the 8th and 9th of August 2018\(^{527}\). The 1-day rainfall of 398 mm, 305 mm, 255 mm, 254 mm, 211 mm and 214 mm were recorded at various

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\(^{523}\) According to Cambridge law dictionary “Development” means: “the process in which someone or something grows or changes and becomes more advanced: healthy growth and development”  
<https://www.soas.ac.uk/cedep-demos/000_P501_USD_K3736-Demo/unit1/page_12.htm> accessed on 08-10-2019

\(^{524}\) Ecologically fragile areas is an extremely sensitive and highly vulnerable ecological are with high susceptibility to anthropogenic stress, highly altered natural habitats, seriously threatened biodiversity, and very delicately balanced and unstable abiotic and biotic conditions. Available in <https://www.plantscience4u.com/2018/07/ecologically-fragile-area.html> accessed on 3-06-2019

\(^{525}\) From 8.8 Hundred thousand hectares in 1970-71, in 2018 the state was left with an estimated 1.67 hundred thousand hectares of paddy land

\(^{526}\) “Why Kerala floods killed so many, destroyed so much” Prabhash K Dutta, India Today, NewDelhi

\(^{527}\) https://www.undp.org/content/dam/undp/library/Climate%20and%20Disaster%20Resilience/PDNA/PDNA_Kerala_India.pdf accessed on 17-10-2019
districts on 9 August 2018. This led to further flooding in several places during 8-10, August 2018. The water levels in several dams were almost near their Full Reservoir Level (FRL) due to continuous rainfall from 1st of June, so water needed to be released from the dams. Another severe spell of rainfall started from the 14th of August and continued till the 19th of August, resulting in disastrous flooding in 13 out of 14 districts. So, while the state was already flooded, 35 dams were discharging water, with all their gates opened at the last minute. The flood damage could have been reduced by 20-40 % if the dams and reservoirs released the water slowly in the two-week period when the rains had subsided. The state did not have an advanced warning system in place. They released water from the dams only once the danger levels, i.e. levels at which the dams’ structures can be damaged were reached.

Even before government agencies could reach flood victims, survivors started conducting relief operations in Kerala. The floods in Kerala reveal poor planning and nature's fury towards its destruction. During this demanding time all of Kerala was united. The significant aspects of the rescue and relief operations were undoubtedly the calm coordination between the multitudes of civil actors from government officials to fisher folk, highest professionals to school children, all of whom turned up when they were needed the most. Schools, churches, temples, universities, commercial complexes were all converted to temporary relief camps in almost no time.

Much before the Navy and the Coast Guard came to rescue people from Kerala's sinking villages and towns, the locals, sensing the ferociousness of the floodwaters, banded together to save their own. People went from house-to-house, knocking on doors in the dead of night to tell strangers, friends and family that it was not safe to stay at home. Those in low-lying areas were hasty in assessing the danger, grabbed clothes and a few essential items and ran out of their homes. Others, who had the luxury of upper floors, sat nervously for hours before listening to their villagers’ appeals. They had the more threatening stories to tell, escaping in a quivering fishing boat or canoe as it danced left and right in the intense currents of the river. Together, the villagers who probably did not even know each other’s names, showed extraordinary courage in the face of adversity. The first reaction within the state government was a gathering of information on people who were missing or stranded that was circulated swiftly through social media networks. Along with names, location-based requirements of essential items were quickly distributed on multiple platforms with social media proving to be the cornerstone of probably the world’s largest such citizen-led rescue and relief operation. High education levels and comfort with technology helped in such efforts mushrooming all over the state. Before long, the state government began centralising all efforts through a single website. Vital, the website enabled effective coordination and communication between the public, rescue volunteers and government authorities at different levels. During the floods, the government of Kerala took all the possible measures to save lives and provide emergency assistance. The government has pressed into service at least 67 helicopters, 24

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528 Special Correspondent, Poor Dam Management Blamed for Kerala Floods, (The Hindu, April 4, 2019)
529 Sudha Nambudiri, Kerala Floods: IMD says Warnings were given Early, (The Times of India, September 3, 2018)
Aircraft, 548 motorboats and thousands of personnel from the defence forces, NDRF, Coast Guard and other central armed police forces\textsuperscript{530}. This instance killed nearly 500 people and incurred 31,000 crore worth damages. After that the focus was shifted to recovery and rehabilitation. Before this measure was adopted the state had to deal with the magnitude of wastes produced due to flood. It was so urgent to deal with waste as those wastes generated were dangerous. The central and state ministry announced an ex gratia payment of ₹ 2 lakh per person to the next of kin of the deceased, ₹ 50,000 to those seriously injured. The Prime Minister also extended the help from Centre to rebuild homes, provide assistance to farmers and additional funds under the employment guarantee scheme\textsuperscript{531}. An immediate financial aid of 10,000 rupees was given to the affected families for cleaning and provisions were also made for necessary food materials for the next two weeks after the flood. Officials visited homes to assess the damage caused to buildings and other infrastructures. Based on the final report, an amount to redress the damage is awarded as damages. This is still in the finishing stage. At the anniversary of the 2018 flood another catastrophe visited the state.

**Flood and land sliding in 2019**

In August 2019, great land sliding in many northern areas\textsuperscript{532} as well as hilly areas of state took the lives of many, and it affected the rebuilding measures badly. Kerala has been hit by incessant rainfall during this August. It witnessed 24 landslides in 24 hours, spiking the death toll to 22 on August 9, 2019. Nearly 22,165 people have been shifted to relief camps. Heavy rains have been lashing the coastal state since August 7. It has thrown normal life out of gear. Of the 14 districts in Kerala, nine in the north have been put on red alert; three in central on orange alert, while two in south on yellow alert. Across the state, 315 flood relief camps have been opened. A massive landslide at Kavalappara village in Malappuram district has reportedly buried 30 of the 70 houses. Many are feared to be dead and buried under the mud.

This has created an alarming situation in the state and people do feel afraid that Kerala has turned into a place not worth residing in. This is because of the absence of proper implementation of the principle of sustainable development in the environmental policy of state. Resources are exhausted without proper regulation in the state. Absence of regulation doesn’t mean absence of legislation. There is plethora of legislation. But there is absence of comprehensive coverage of the land use pattern and basically every regulation is often violated due to the bribery and red tape which exists among the enforcing officials and the political parties ruling the state.

**Rebuild Kerala Program announced by Government**

In response to the environmental devastation the Government came up with a plan called “Rebuild Kerala 2018”. Here the government gave priority to supplanting the manmade structures. The preface of the document states that it presents a unique approach to rebuilding the state. This initiative is said to attempt a bold vision for *Nava Keralam* that

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\textsuperscript{530} R. Krishnakumar, Kerala flood of 2018 in list of world’s worst extreme weather events in five years [Frontline, September 27, 2019]

\textsuperscript{531} Neetu Chandra Sharma, Sayantan Bera, ‘Centre steps up to help flood hit Kerala following Modi’s visit’ [Live Mint, October 21 2019] <https://www.livemint.com/Politics/GieEjQ7tNIF0qFup0NZSFLN/Centre-steps-up-to-help-flood-hit-Kerala-following-Modis-vi.html> accessed on 15-10-2019

is more resilient, green, inclusive and vibrant. It is said to encompass the key sectors of economy such as agriculture, animal husbandry, fisheries, forestry, land, livelihoods, roads, bridges, transportation, infrastructure, water supply and water resources management. This also gives importance to crosscutting priorities. Among them, climate change and environment deserve special mentions in this context. But refurbishment of the natural infrastructure lost due to human intervention in the last few decades is also equally pivotal to regain the safety of life in Kerala. It is high time to probe into the reasons behind such a great environmental catastrophe which put the life of human and nature under great threat in the State.

**Destruction of ecology of Kerala through centuries**

Broadly speaking, major ecological destruction began in Kerala during the British colonial period. Specifically, it relates to the advent of industrial revolution. As the environmental historian Richard Grove has rightly characterised, colonialism was also a period of ‘green imperialism’. By 1810, the British had established effective control over all three regions of present-day Kerala i.e. Malabar, Kochi and Travancore. Since the beginning of the nineteenth century, there have been infrequent attempts to clear forests and establish commercial plantations of coffee, cinchona and tea. This in turn led to destruction of forests in watershed regions of state. Large-scale forest destruction happened in 1877-88, when the British planter John Daniel Monroe bullied the local ruler to lease him 144,020 acres (215 sq. miles) of virgin forests in the Kannan Devan hills in Idukki region of the kingdom of Travancore. This was over 3 per cent of the total area of Travancore. Tropical forests were cleared for large-scale commercial plantations, first for coffee and subsequently for tea. Thus began the massive destruction of what the Madhav Gadgil Committee called the ‘water towers’ of the Southern-Western Ghats.

This plantation craze spread across all three regions of Kerala. It stripped large areas of the high ranges. In the beginning of the twentieth century, rubber arrived in Kerala and spread like a parasite through the low-lying areas of the Western Ghats and the midlands. Rubber, however, also contributed to forest and biodiversity loss across Kerala, occupying 28 per cent of the cropped area (5.5 lakh hectares) in the state today. The uncomplimentary adjective of ‘Devil’s milk’ given to the rubber latex by John Tully, who wrote a global social history of rubber, is appropriate at least in the case of Kerala. This Plantation obsession started during the Colonial rule and continued in an intensified form in later decades.

Another land use change happened in various phases, i.e. 1940’s and 1960’s; the unregulated internal migration and its impacts on the lifestyle pattern, coastal and midland of the state. This can be called ‘migration impact’. The large-scale internal migration from coastal and midland areas to the Western Ghats in Kerala which began with the aim of more luxuries and infrastructure building through land use changes which, in the long term, proved to be malignant against the environment. This contributed to forest destruction and the migrants turned to rich people controlling the government in power. This affected the tribal lands and the life of tribes, too. In every area of migration, especially the Wayanadu and Idukki districts, migration resulted in extensive forest clearance for agriculture and human settlement.

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533<https://kerala.gov.in/documents/10180/5f7872f9-48ab-40c8-bf3f-283d8dceacfe> accessed on 10-10-2019
Another factor that led to forest destruction and consequent land use change is the substantial urbanisation in the state. Urban population in 2015 shot up to 47.7 per cent out of the 3.36 crores of population. Kerala is today a suburban state. Urbanisation made major demands on resources for construction and infrastructure projects. The explosion of stone quarries in the state after 1980 has been astonishing. Today, Kerala has over 5,000 quarries, out of which over 2,000 are in the Western Ghats. The real reason behind the land sliding as identified by various scientists is unregulated quarrying of these ecologically fragile areas.

Yet another factor is hydel projects. These contributed to destruction of over 350 sq. km of evergreen forests, in the reservoir area alone. Three major rivers have over a dozen dams each, which have altered the riverine ecosystem in many ways. In 1957, 36 per cent of Kerala’s land area constituted forests and by 1990 this was reduced to 12 per cent. The 2016 economic survey of the Kerala Government claimed that Kerala had 19,230 sq. km of forests, which is 49.5 per cent of the total land area. But the details provided within proves that only 1523 sq. km is classified as ‘dense’ forests, which is only 3.9 per cent of the state’s land area. This is the only real tropical forest which provides multifarious ecological services. The rest are degraded forests (23.9 per cent) or open forests (21.7 percent). In an ecologically fragile state where 75 per cent of the land has an incline of above 20 per cent, the loss of dense forest cover of this magnitude is an invitation to disaster. Therefore, it is pertinent to say that massive forest loss in the catchments of rivers and dams have contributed to excess runoff during the extreme rains in August 2018 in Kerala, adding to the severity of the floods.

Sand extraction, which brought in another land use change, disrupted the riverbeds. This has, in turn, led to reduction in the water retention capacity of the riverbeds. Based on sand audits conducted in 14 major rivers, it is found that sand extraction is up to 85 times in excess of the sand deposition. This has caused rivers to overflow not just to their flood plains, but to the basins as well. The entire 38,863 sq. km of Kerala’s land mass is the catchment area or drainage basin of its 44 rivers and their 900 tributaries. Many tributaries have been done to death. Thousands of flood paths consisting of small streams, rivulets, etc., have been levelled for construction. Thus, the sand extraction in the state is done without assessing the capacity of rivers.

Apart from the river network, there exists a network of coastal backwaters, freshwater lakes, wetlands and marshes. Together, they used to cover an area of 1,279 sq. km or 1.28 million hectares. All the major freshwater lakes have shrunk up to one-fourth their original size, in some cases. The story of the 32 brackish coastal backwater systems (which includes 10 estuaries) is no different. Two of the biggest backwaters – Vembanad and Ashtamudi – are protected wetlands under the Ramsar Convention. Six rivers drain into the Vembanad lake. Research studies have shown that Vembanad, which covered an area of 315 sq. km in 1912, has now shrunk to 160 sq. km, thereby losing half of the drainage area of six rivers. This has been a major reason for exacerbating the flooding in southern Kerala. Excessive tourism and urban development have contributed to the destruction of the wetland.

Though not strictly classified as wetland, the once extensive network of 7.6 lakh hectares of paddy fields in Kerala have played the role of flood plains in the state. Paddy lands in Kerala are low-lying areas into which water drains from the surrounding hills in the
midlands. About 80 per cent of the paddy fields have been levelled or converted for construction and commercial cultivation and only 1.9 lakh hectares remain. Thus, the entire water cycle beginning with the ‘water towers’ in the Western Ghats to the village level has been disrupted through ecologically unwise human intervention. After 1980, uncontrolled tourism development has also contributed to this disruption in the mountains and coastal areas. Ecologically regulated tourism, rather than just branding mega tourism as eco-tourism, would be critical to preserving Kerala’s ecosystem. Adding to this, the global climate change has put the life in Kerala on a high-risk graph.

**Are these Environmental crimes?**

These are great environmental crimes that go against every grass-roots principle of environmental law. This is due to the greed of people, for exhausting resources according to his purchasing capacity\(^{534}\), concept of property rights relating to land and the lack of proper policy or legislation which cast specific liability, and absence of stringent implementation mechanism regarding environmental protection in the state. This is really a crime done by the government against the intergenerational equity\(^{535}\), intra generational equity\(^{536}\), doctrine of public trust\(^{537}\) and sustainable development\(^{538}\). Along with the destruction of ecology, it gives rise to number of unknown life-threatening diseases\(^{539}\) as well. On one side, environmental crimes are increasingly affecting the quality of air, water and soil, threatening the survival of species, and causing uncontrollable disasters. On the other, environmental crimes also impose a security and safety threat to a large number of people and have a significant negative impact on development and the rule of law. Despite these issues, environmental crimes often fail to prompt the appropriate governmental response. Often perceived as ‘victimless’ and incidental crimes, environmental crimes frequently rank low on the law enforcement

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534 The Constitution of India, 1950 guarantees the equitable access to resources. Art 39(b)(c) caste duty on the State to make legislations to that effect.


It signifies the rights and interests of the present and future generation regarding the renewable and non-renewable resources of earth. Many contemporary international instruments deals with the use of the resources available and to make them available for future generation. Peoples have recognized the value and importance of the resources available and what may happened in future if the resources will not be available.


Intra-generational equity is different from intergenerational equity. It deals with the equality among the same generations as far as the utilization of resources are concern. It includes fair utilization of global resources among the human beings of the present generation. The concept of intra-generational equity provides rights and duties to every person of a single generation to use and take care of the renewable and non-renewable resources moderately among the members of the generation. In a developing country like India the rule of intragenerational equity is applicable to certain extend, as in this kind of developing countries more resources are required for development of the country and to ensure economic stability.

537 Diwan, P ‘Environment Administration, Law and Judicial Attitude’ [New Delhi, Deep & Deep Publications, 1992]


priority list, and are commonly punished with administrative sanctions, themselves often unclear and low. Thus, this article tries to explore in detail the gravity of this environmental crime and tries to propose the possible ways to help the policy framers and enforcers. Specifically, this article tries to explore the most basic issue of poorly enforced land use pattern and practices since the formation of state.

Environmental risk drivers identified by the state after the great flood in 2018

According to the Rebuild Kerala plan, the risk drivers identified by the planning commission were as follows:

Floods are the most common of natural hazards that affect the people, infrastructure and natural environment in Kerala, and incidence of floods in the State is becoming more frequent and severe. Other than floods, the State is also vulnerable to droughts, landslides, storm surges and Tsunamis. Some contributors that exacerbate the disaster risks in the State are:

• Unsustainable and weak management of natural resources and poor awareness of the changing climatic conditions. Degrading environment due to extensive exploitation of the natural

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540 <https://kerala.gov.in/documents/10180/5f7872f9-48ab-40c8-bf3f-283d8dceacfe> accessed on 11-10-2019
541 Ibid at p. 42. Kerala is highly vulnerable to multiple natural and anthropogenic hazards and a changing climate, given its mountainous topography and geo-hydrological features. Communities regularly face low-severity but high-frequency disasters such as floods, rains, landslides, heat wave, lightning and thunderstorms. More broadly, the State is prone to cyclones, storm surge, coastal erosion, tsunami, drought, soil piping and earthquake. Kerala is also one of the most densely populated Indian states (860 persons per square kilometer) which makes it even more vulnerable to damages and losses because of disasters. Floods are the most common of natural hazards that affects the State. As per the State Disaster Management Plan 2016 of Kerala, 5642.68 km2 or 14.52% of the total area of the State is prone to floods. In Alappuzha district more than 50% of area is identified as flood prone.16 The State lies in seismic zone III which corresponds to Moderate Damage Risk Zone (MSK VII). The State falls under Moderate Damage Risk Zone for Wind and Cyclone (Vb=39 m/s). As per IMD data for the period 1877-2005, the State witnessed six cyclonic storms and five severe cyclonic storms. The State also witnesses high incidence of lightning, especially in the months of April, May, October and November. Lightning strikes cause heavy loss of lives in the State. Landslides are a major hazard along the Western Ghats in Wayanad, Kozhikode, Idukki and Kottayam districts (as seen in the weather led disaster that occurred in 2018). The western flank of the Western Ghats covering the eastern part of Kerala is one of the major landslide prone areas of the country. 1500 sq.km. in the Western Ghats is vulnerable and every year with the onset of monsoon, landslides are reported. The mountain regions experience several landslides during the monsoon season (Kuriakose, 2010) leading to road collapse, silting of river beds and creating heavy damages on public and private assets. The coastline is prone to erosion, monsoon storm surges and sea level rise. Land subsidence due to tunnel erosion or soil piping is a slow hazard that has recently been affecting hilly areas. Kerala experienced 66 drought years between 1881 and 2000. More than 50% of Kerala’s land area is susceptible to moderately-to-severe drought. After the drought years of 2002-2004, 2010, and 2012, Kerala State was officially mapped as mild to moderately arid by the Indian Meteorological Department (IMD). In 2017, the IMD stated that the year brought the worst drought in 115 years. Increasing incidence of drought is mainly due to weather anomalies, change in land use, traditional practices and lifestyle of people. Other natural hazards faced by the states include forest fires, swell waves and tsunami. In 2019, heat waves were declared as a state specific disaster in the State.
resources and deforestation, coastal erosion, monsoon storm surges, sea level rise and land subsidence due to tunnel erosion or soil piping (a creeping slow hazard that emerged from analysis of landslides).

- **Lack of awareness and anticipation of disaster risks**, including weak institutional capacity to deal with high-intensity disasters, inadequate early warning systems and protocols respectively, limited Disaster Risk Management (DRM) and slow roll out of community-based DRM activities. Additionally, there is limited consideration of disaster risk within social and economic sectors, partly because of competing demands on limited financial resources and inadequate capacity.

- **Poor maintenance of existing assets**, which accentuates risk and increases the State’s vulnerability to natural disasters. Examples are: deteriorating, aging and poorly maintained infrastructure (including irrigation channels); minor major and irrigation dams managed by too many agencies; erosion of river embankments, roads, bridges, and encroachments into water bodies and sand mining from rivers, water channels and canals leading to narrowing carriage capacity of water channels; and poor solid waste management and sanitation disposal/treatment facilities.

- **Inadequate storm water drainage** and filling of traditional water storage reservoirs, which increases the pluvial flood risks. An increase in flood plain occupancy and reclamation of water bodies and wetlands results is also increasing flood damages. Riverine flooding is a recurring event consequent to heavy or continuous rainfall exceeding the absorptive capacity of soil and flow capacity of streams and rivers. This causes a water course to overflow its banks onto flood plains.

- **High density of urban areas.** This density includes a population of 860 people/km2 (2011 Census), narrow roads, dense and intrinsic road network and density of coastal population in vulnerable areas. Rapid urbanization influenced habitations into uncontrolled expansion on both banks of the rivers/water bodies thereby encroaching into water channels/bodies and constricting the floodplains.

- **Absence of risk-informed urban planning.** Non-compliance to design standards and non-incorporation of resilient features in urban infrastructure was reaffirmed by the widespread flooding in urban and semi-urban areas of Kerala. Master plans prepared by the Chief Town Planner (CTP) are still awaiting feedback from the Local Self Government Institutions (LSGIs) to enable appropriate rectification and issue of notification of approval of the master plans for the respective LSGIs. Till date, master plans of only 19 local bodies have been notified and there is little evidence of hazard risk 22 informed planning process in the State. Lack of notification has resulted in unplanned development/expansion in urban areas.

- **Poorly enforced land use pattern and practices:** Current land use regulations are in the State are based on (a) the Paddy and Wetland Act, (b) the River Management Act; and (c) the Kerala Municipal Building Rules (KMBR) and the Kerala Panchayat Building Rules (KPBR). These orders do not ideate into a single land management policy/regulation for enforcement agencies to pursue due to the regulatory and not restricting nature of these orders. A commonality of law for land use is absent, due to which business and habitation zones has overlapped over the years.

### Social and property relations of Kerala (changes in land use pattern from 1957 to 2018)

Kerala was a land of villages. The State is located in the south-west part of India formed in November 1, 1956 as part of the linguistic reorganisation of the Indian States by merging the three Malayalam-speaking regions – the princely states of Travancore and Cochin and the Malabar district of the Madras Presidency. It is bordered by Karnataka to the north and northeast, Tamil Nadu to the east and south, and the Arabian Sea on the west. Thiruvananthapuram is the state capital. According to an earlier survey by ‘The Economic Times’, five out of the ten best cities to live in in India are located in Kerala.

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At the time of formation, like other states of India, agriculture was the major source of income for Keralites. They made their living from agriculture or related occupations. This meant that agricultural land was the most important productive resource for Keralites. Land, i.e. to mean agricultural land (referencing paddy lands), was the most important form of property. The person who had good paddy fields adorned great dignity and respect in the community. The value of those lands was high when compared to other forms of land. But land was not just a ‘means of production’, nor just a ‘form of property’. Nor was agriculture just a form of livelihood. It is also a way of life. Many of the cultural practices, festivals and patterns of the society can be traced to its agrarian backgrounds. But, like other states in India, it had a rigorous caste system practised by all means. This reflected in the land holdings also. Most of the land area in the hands of the lowest caste was alienated to the temple property based on the unquestioned attitude towards Brahmanism (priest hood). These properties administered under temple property later on became the property of higher caste, from whom this land was taken by middlemen called Nairs on various land leases. Again, lower property rights were granted to lowest caste people based on the various contractual agreements which were arbitrary and unethical.

Land systems in Travancore and Cochin were classified into three viz. Jenmom, Sirkar or Pandaravaka and others. Agrarian structure of Malabar until the second half of the eighteenth century was of joint proprietorship. It consisted of five hierarchical groups such as Janmi, the Kanakkaran, the verumpattakkaran, the cheruianmakkaran and agricultural labourers. The Jenmies were the landed aristocracy and the intermediaries who occupied the middle stratum in the social and agrarian structure represented the upper stratum of the tenancy. The lower caste, considered “polluting caste”, had no land of their own. Thus, the land was concentrated in the hands of few people who had no relation to the land. Various forms of the feudal system existed all over India, which required a radical reformation in the agrarian relations and the holdings of land during the independence movement. Formation of the Constitution of India and the consequent changes brought in by the property relations reflected this new approach. Gandhian ideals of property also

According to the dictionary meaning it is a field planted with rice growing in water.
545 M N Srinivas ‘Caste in Modern India’ [Journal of Asian Studies, Vol XVI, p 548]
As a community, dalits are found to be at the lowest level of land ownership in Kerala. This abysmal status of land ownership is the result of three exclusionary processes. Dalits were historically excluded from land ownership due to the caste system. This is evident from the temple inscriptions that land was owned by non-Namboodris. They were the temple priest and upper caste. They propagated an idea that gift of property to temple would wipe away the sins and this promoted the large scale alienation of property. These then transferred and misappropriated by upper caste. Second, they were consistently excluded from the process of land reforms in a significant way. Lastly, the current trends in land market activities tends to exclude them from land ownership. This article shows how social inequality in land ownership in Kerala, known to be a progressive state, remains high. Dalits lag far behind in land ownership as compared to the upper castes reinforcing the fact that the land-caste nexus still dominates in Kerala.

547 P. Sivanandan, Annual Number: Class and Caste in India [Economic and Political Weekly Vol. 14 No. 7/8 February 1979 475, 480]
548 Ryotwari and Mahalwari system etc.
influenced the framers. They identified that the backwardness of Indian economy and social structure is highly intermingled with the existing land use pattern and brought in the concept of agrarian reforms through the radical changes in existing property relations. Land to the tiller was accepted under the land reforms Act and Kerala was the best example in the implementation of the Land reforms in true sense. This reflected the will power of the Government in the implementation a great change which affected the whole people.

**Legislations bearing on Land use since the formation of Kerala state**

The historic legislation that brought radical changes in the land use pattern that existed all over Kerala was The Land Reforms Act, 1963 which was, at its inception, named Agrarian Relations Act, 1961. Later, this Act was reformulated and renamed with greater changes and The Land Reforms Act, 1963 was introduced. The Land Reforms Act, 1963 was the first and best legislation which Kerala legislature enacted and executed by all means and bounds. This brought radical changes in the land use pattern. It redefined the then-existing property relations. Ownership of land was concentrated in the hands of few. There were parasitic intermediaries too. The lower strata of tenants and kudikidappukars were left bare minimum rights over land. This resulted in utter poverty to the people in society. The changes introduced and brought in through the legislation were worthy in the context of Kerala but the changes were unsustainable. These changes brought the greatest blow to the agricultural sector. Considering the geography of Kerala, unlike other states, the land tracks in the hands of jenmies were small. The implementation of land rights to tenants and introduction of ceiling area and the turning of agricultural labourers to land holders and owners, which were envisaged as positive stroke to the economy and agriculture, turned to be a futile attempt. This is proven by the existing situation faced by Kerala. The major aim of land reform was land to the tiller. But the tillers who benefitted out of this legislation did not use this for the purpose for which it was assigned to them. After the implementation of the rights to the tillers, later Governments and authorities, who were duty-bound to implement the provisions of the Act, failed to review the working of this legislation. Most of these lands were alienated in the wake of commercialisation. Moreover, the flow of foreign (gulf) money brought in the radical changes to the lifestyle of the entire community. There was absence of a proper support system from the Government to the agricultural community, too. Agriculture as a labour lost its prestigious position and the agricultural labour class migrated to other jobs and thus the lands assigned were left fallow for many cultivating seasons. These fallow lands fell into many unsustainable uses. This led to change in the land-use pattern of Kerala.

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549 Due to certain problems in implementation of certain provisions the Act was suspended. See the decision in Karimbil Kunhikannan v State of Kerala AIR 1962 SC 723.
551 The Kerala Land Reforms Act 1963 s 2(57)
552 Id at s2(25)
553 Id Chapter 2 s 3
554 Id at ss 80,81, 82
555 The Kerala Conservation of Paddy Land and Wetland Act 2008(Preamble)
556 Tiller means a person who toils on land
557 The Kerala Land Assignment Act 1971
After the Land Reforms Act, the state had promulgated a historic order named The Kerala Land Utilisation Order, 1967\textsuperscript{558}, making it mandatory to use the land at the disposal of every person\textsuperscript{559} for cultivation of food crops specified under the order. Another important element was total prohibition of conversion of paddy fields except with the prior permission of the authorities concerned. The government delegated their basic duty of providing essential food supplements to the people of the locality by entrusting the same to the holders of land. This is a good concept because government is the ultimate owner of land, and this resource is distributed among the people for various uses. These uses are restricted for the beneficial uses of society. Land use is not a mere fact left to the will of holder or owner alone. This can be seen as a positive restriction imposed on the land. But this order remained a paper tiger. Authorities\textsuperscript{560} entrusted with the implementation were keeping a closed eye towards the rampant conversion of the paddy fields for commercial complexes and housing schemes. Now the area under paddy cultivation is very low (fallen to two lakh hectares) and the production of the state can sustain only 10-12\% of the consumption needs.

The Land Development Act 1964, and the authorities established under said legislation, did little in achieving the objectives envisaged under the Act. The wasteland development and the development of soil resources are the major aims envisaged under the Act. But even after many years, the implementation is minimal. The Act tried to bring back the common cultivation pattern by establishing padasekhara samithis\textsuperscript{561} and granted aids to the schemes executed through these. But this legislation also brought no new changes apart from establishing certain administrative departments for the developmental plans.

The Land Utilisation order was a futile attempt to regulate the land use and the government realised this pathetic situation only in 2008, when it enacted legislation to conserve the paddy lands and wetland, and to restrict the conversion or reclamation thereof to promote the growth in the agricultural sector and to sustain the ecological system in the state of Kerala. Preamble of the legislation states that indiscriminate and uncontrolled reclamation and massive conversion of paddy land and wetland is taking place in the State. It also states that there is absence of effective legislation in this regard. Thus, the Act has triple objectives, such as promotion of agricultural growth, ensuring the food security, and to sustain the ecological system in the State of Kerala. In the statements and objects of the Act it is admitted that the massive conversion reduced the area available under paddy cultivation from eight hundred thousand hectares to two hundred thousand and the ecological system has lost its quality irrecoverably forever. This results in various consequences to the entire society. Thus, the Act tries to address the wider interest of society and mankind to ensure their basic sustenance needs. Provisions prohibit the conversion or reclamation of paddy land and wetland except with the prior permission under stringent terms and conditions. This created an alarming situation among the builders and developers who were grabbing the paddy land and

\textsuperscript{558} The Essential Commodities Act 1955
\textsuperscript{559} This order was promulgated to avoid the scarcity of food crops and to make the supply of essential commodities to the community.
\textsuperscript{560} Revenue Department and specially collector of the locality was given greater powers of implementation.
\textsuperscript{561} The Kerala Land Development Act 1964 s 7A
wetlands and converting them to housing apartments, commercial complexes and brick kilns. Several applications were forwarded to government for conversion of paddy land and wetland. In the preparation of databanks relating to these areas by the local authorities, and the constitution of various enforcement authorities, the rules of the Act received criticism from all sectors. Therefore, the conversions and reclamations still take place without any regard to the provisions and authorities keep a closed eye towards this situation. At this juncture, the Government brought a worse amendment to the Act in 2018. This resulted in the Kerala Conservation of Paddy Land and Wetland (Amendment Act, 2018). The concept of unnotified land was brought in to regularise the changes brought in paddy land wetlands which has not fallen under the databank prepared by the local authority. If such changes are certified by authority as irreversible it could lead to regularisation of conversion. The similar provisions are retained for the conversion of wetlands too. Thus, the Act enacted to conserve the left-out small area of cultivation and the kidneys of nature changed to no use by the amendment. All this happens under the guise of the vague term development which only speaks about the development of infrastructure and not a holistic development.

Another enactment which requires special mention in this circumstance is the Coastal Regulation Zone Notification 1991 promulgated under the Environmental Protection Act, 1986. This alarmed all sectors of the society. There were multiple amendments, and still there are various grey areas in the implementation of this notification. But the judiciary, specially the apex court, has reverted positively, going vehemently against the violators of the notification.

The Western Ghats, which are considered common heritage of mankind under the Heritage Convention, also deserves special mention. Various committee reports, such as Madhav Gadgil, pointed towards the need for sustained use of resources and preservation of such an ecologically fragile area, which raised greater criticisms only based on the violation of property rights of the individuals and the restrictions on the use of these areas. This was really beneficial to none except the lobbies behind the quarries. Even now, the quarrying takes place unabatedly in these areas. The three Ramsar sites in Kerala are also under threat of destruction, and wise use and conservation are disregarded from various fields. The latest landslides in the northern region of states also are no exception to the rampant violations of land uses and the unabated quarrying which occurs in the hilly areas. This has affected the entire ecology very badly. The government remains answerable for the lost lives during the last two years even though quick actions and redressal measures were undertaken by the present government.

The state had different planning laws. Only in 2016 the Kerala Government enacted the Kerala Town and Country Planning Act, 2016 with the objective of providing for the promotion of planned development and regulation of growth of urban and rural areas. It is said to focus on scientific spatial planning. This Act is implemented with

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563 Spatial planning in Ghana: Origins Contemporary Reforms and Practices and New Perspectives (Chap. 2 Ed 1Springer Cham PP11,27) defines spatial planning as ‘a set of governance practices for
retrospective effect. But the scientific spatial planning applicable for the whole state is still to be formed. It is clear that spatial planning requires preferably timely detailed spatial knowledge about soil cover. It requires extensive soil survey and mapping. This cannot be simply an original data collection, but more complex and derived soil information, functions, processes or services. This can result in better policy making. This data should be spatially exhaustive and consistent as well as both globally and locally reliable. It should cater to the needs of various stakeholders involved in land use and also the projected climate change impacts on the whole society. This facilitates better impact assessment and vulnerability assessment leading to sustainable environmental modelling. A unified national soil type map with spatially consistent with predictive capabilities that unifies the expert inputs and databases from all sectors mainly agriculture, forest and wetlands is required. It should meet the socio-environmental and economic challenges of the day to meet complexities. This should also reflect the priorities of that society and nation. Still, this area remains to be addressed by government and concerned authorities as to whether the objectives of the Act are undertaken in true sense.

The environmental crimes in Kerala: a legislative analysis
The Environment (protection) Act, 1986 defines environment as including water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property. This Act lays down the general power of the Central Government in protection and safeguarding the human environment, other living creatures, plants and property. This power is so vast and all-embracing. This Act is a skeleton and the rules enacted to regulate various activities which may prove to be hazardous to the life and property are enacted later according to the needs of the time. Offences against the environment are made...
punishable under the Act. This applies to the state of Kerala also. This is the most important legislation bearing on the environment and it includes land use.

The constitution of India, 1950, is the law of the land. This is the base law from where every legislation draws its authority, and it contains three lists upon which the legislative power is divided. Apart from these subjects, national importance can be legislated by the Central Government and the matters of International obligations under different conventions are the duty of the Central Government. Thus, the specific area of concern, i.e. land, falls under entry 18 of list 2. But there are certain areas like common heritage of mankind, wetlands of national and international importance, areas whose damage will have impact on climate change, interstate rivers and coastal areas, and of course forests under every state, which are the common land areas which need interference from Central Government. Considering the environmental aspect, the Centre could exert control over the land for the quality maintenance. Therefore, land use regulations are governed by various legislations legislated by Central and state governments. Moreover, the land use patterns in Kerala are becoming more complex day by day due to the population increase. Therefore, the legislations applicable to land use patterns in Kerala, which can attract various environmental crimes, though not in strict sense of environment as it is seen today, are the Kerala Land Reforms Act, 1963 (and amended from time to time) and the Kerala Land Utilisation Order, 1967, the Land Development Act. 1964, the Paddy Land and Wetland Conservation Act, 2008, the wetland (Conservation and Management) Rules, 2010 and its latest Amendment in 2018, the Kerala Town and Country Planning Act, 2016, the Coastal Regulation Zone Notification, 1991, Protection of River Banks and Regulation of Removal of Sand Act, 2001, the Municipality Act, 1994 and the Kerala Panchayat Raj Act, 1994. Most of the legislation enacted prior to the Environmental (Protection) Act, 1986 does not even incorporate the term ‘ecology’. But these provisions, if implemented, would indirectly would have protected environment in strict sense. Only the 2008 legislation enacted by the Kerala government incorporates the word as protection of ecology as its one aim.

The Constituent Assembly that framed the Indian Constitution did not consider the question whether the Parliament or state legislatures should regulate the environmental matters relating to the use of land. Instead the distribution was influenced by the distribution of environmental matters within the three lists of Government of India Act, 1935. Thus there exists a tension between centre and state regarding the regional development and natural resources, especially land. There are about two hundred central and state legislations bearing on environmental protection which covers various aspects of land use. But these legislations are inadequate to meet the modern challenges of integrated management. In a landmark decision of Indian Supreme Court in T.N. Godavarman Thirumulpad v. Union of India, the court delinked ecology from land and its ownership and stated that ecology is not the property of any state, but belongs to all, being a gift of nature for the entire nation. Thus the Court has taken away the legal jurisdiction which the state might have claimed on the basis of territorial jurisdiction.

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567 Id. at ss 15 16 17
568 The Constitution of India 1950 [Schedule VII]

List 1 deals with Subjects on which the Central Government exercises legislative power, List 2 deals with States power to enact various law on various subjects and List 3 is the concurrent list up on which both Central and State exercises power of legislation.
Identifying the loopholes in land use pattern and addressing them

The Kerala Development Report, prepared by the planning commission, states that during the past four decades Kerala witnessed a slowdown of its population growth rates, decline in the primary producing sectors particularly in agriculture, tremendous expansion of its social service activities, importantly trade, commerce, transportation and other services. Through this report, the state has admitted that in the materially productive sectors of agriculture and industry, Kerala’s performance has not been remarkable. It is the process of large-scale emigration that began in the early 1970’s that kept the Kerala economy in revolutionary changes in consumption patterns, housing conditions, educational levels and health status. This also led to changes in the land use traditionally followed. Various other social factors such as influence of missionaries and the progressive ideals implemented by the changing governments and the absence of implementation of all the above said legislations in the true sense resulted in malady to Kerala society as a whole. Therefore, the question to be addressed is whether the existing Kerala Development Model is conducive either for balanced and sustained development in any sense or for harnessing Kerala’s full potential. The answer poses many challenges before the government as a provider and facilitator of various welfare services, guardian of life, protector of nature, ensuring equity and sustainability of resources, their preservation and conservation.

In 2018 extreme precipitation events and flooding caused losses to human lives and infrastructure. It affected millions of people. Even though the immediate causes were large scale rainfall and the poor carrying capacity of reservoirs, the real reasons are the unsustainable land use pattern followed and the consequent destruction and conversion of paddy lands, wetlands, forest areas and hilly tracts. This results in extreme hot temperatures in the state and it invites unforeseen consequences to a large mass of poor people. These types of disasters have become a common feature of the time, especially in the Asian continent\(^{569}\), and in many states of India\(^ {570}\).

The Kerala government should make a comprehensive spatial data collection regarding the future planning. It should address the various stakeholders and their genuine needs. Areas which can be brought under preservation and conservation are to be marked out. Stringent enforcement mechanisms should be implemented at any cost. Every common property area, such as preserved wetlands, Western Ghats, forest, rivers, paddy fields, hilly tracts and coastal areas, is to be brought under the public trust of state, and the custodians of any of the areas falling under these listed sites should be protected as trustees, and special provisions are to be made for their efforts for the society. It should be with greater incentives, giving them greater dignity and living conditions for their family as well. Being a state of educated people, the tertiary sector is given more importance among people. From childhood onwards, each child should be inculcated with high values respecting both the nature and people who are involved in primary sector production.


The environmental crimes are happening from the perspective of individuals, society and from the perspective of humanity also. Because after the Stockholm Declaration 1972, humans have realised that the environment is single and has no political boundaries. Every resource, even though separated by political barriers due to the greed and cultural differences, calls for common policies and approaches from every part. Kerala is not an exception. Every principle enshrined under the international environmental law, such as sustainable development, inter-generational equity and intra-generational equity, public trust, common heritage of mankind etc., is to be adhered to. This should not lag behind, as we are at the verge of destruction. Not only has the lost human lived in the past two years of calamity, the destruction to nature remains un-restorable for the future generations. The development should be readdressed, rather than from the point of view of infrastructural development alone. A comprehensive land use policy pooling the whole resource is the need of the time, with clean-handed officials to implement legislation that is enacted to meet the needs of ecology, is a must in Kerala.
By Dr. Zoi Aliozi

ABSTRACT (265 words) (Article: 8870 words)

This is an inter-disciplinary human rights-based essay, developed through the academic disciplines of law and philosophy. The article is aiming to examine the consequences of climate change on human rights, with a short intervention in the discussion by animal rights-based considerations. From a human rights’ legal perspective, climate change is threatening, in an incomparable way, to fully destroy the fulfilment of a number of internationally protected human rights, like the rights to health and life; rights to food, water, shelter and property; rights associated with livelihood; and with migration. It is critical to understand that the worst effects of climate change are firstly felt by those individuals and groups whose rights protection is already insufficient.

The present article will highlight these risks and advocate for their consideration. This essay is asking questions such as: ‘What are the consequences of climate change on Human Rights?’ ‘What is the role of Human Rights in the Climate Justice area?’ ‘Why Animal Rights voices are not included in these debates?’

Climate change when viewed from a human rights standpoint, is an unprecedented source fountain of human rights violations. My objective is to illuminate this area of study, by critically examining the relationship of Climate Justice and Human Rights, while taking the reflections presented in this essay a step further, by including animal rights voices in the debate. There is a duty upon all academia to engage in Climate Action and contribute to the further development of Climate Justice – and this is where this essay intents to pay a small contribution, by advocating for a Rights-Based Approach to Climate Change.

* Keywords: International human rights, criminal law, environmental law, animal rights, philosophy, climate justice.

PROLEGOMENA:

2020 has been marked by the global pandemic and the unprecedented threat to humankind’s existence.

It is inevitable if not inescapable, to open this climate justice essay with a short reflection on Covid-19, since it is written during the pandemic, and because this case can be proven to be instrumental in advocating for climate justice. As an ancient Greek saying states: “there is no evil without some good”. In that sense, humanity through this collective tragedy and common threat, is also offered with some precious lessons, like for example, a better understanding of

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571 Dr. Zoi Aliozi, is an academic, a human rights educator, an international human rights lawyer, and an award-winning philosopher. She has been engaging with climate justice research and activism—while lecturing law, philosophy and cinema. Parallel to her work in human rights education, she is an active member of the international civil society and offers consultations to human rights organizations around the globe.
the human’s place in the cosmos which is challenging the traditional anthropocentric standpoint of law.

The most important lesson however, is that Covid-19 is more than a deadly virus. It is a symptom of the deteriorated health of our planet, brought about by humanity’s defective relationship with nature, and fuelled by a thorough unethical capitalist “bulimia” that affects even the international law-making process. Human rights law is said to belong to the top of the “ladder” in any body of law, due to its moral power. This is why human rights law can offer the tools and provide its knowhow to develop the means that can lead to the application and flourishing of climate justice. Law is frustratingly limited in its reach when reflecting on ideas without actual legal manifestation through positive law. However, philosophy knows no limits when looking at the ideal, and on what the law should and oughts’ to bring into this world. This is why in combination, philosophy and law, enables legal scholars to push for positive legal change, by presenting arguments that enrich the legal scholarship and aid in the further development of the legal science. In an ideal world then, where fairness and justice will be fully realized, it is environmental protection that should be on the top of the “ladder” in any body of law, sharing a much-needed absolute protection with animal rights which have been unfairly and negligently silenced to date. In the same vein, it will be useful to underscore that, in an ideal world there will be no hierarchies in law, nor double standards in ensuring fairness, justice and the rule of law.

It is unacceptable to discuss about climate justice without including animal rights on the table of negotiations. This essay by identifying this inadequacy of the law-making process, intents to form a contribution towards the repair of this wrong. On the bright side, academia has come a long way in using human rights language to argue for environmental and green crimes. However, from a critical legal point of view, the actual development of this frame of international law has been rather slow and disappointing, especially if one considers the softness of the United Nations Framework Convention on Climate Change (hereinafter UNFCCC) and the inability of the UN to reach consensus, move action, and deliver the promises of its mandate. Although, the science is clear, and despite the fact that scientists rang the alarm bells and warned humankind over and over again about the dangers we are facing collectively as humanity; and the damage inflicted by the anthropogenic harms on our planet; we are failing to move real political action that will translate in strong legal measures and legal protection of the environment, animals, and the empowerment of climate justice. It should be highlighted at this point, that human rights entail more legal power than animal rights in the current global justice order, however, the shortfalls of international courts in adequately prosecuting green crimes, and offering protection to animal rights, is unfair, outdated and requires really advanced advocacy.

This essay intends to stress that law needs to evolve with the demands of our times; and thus, from a legal point of view, the basic rights of every living being to exist and live a life in dignity—free from harm and suffering— should not apply only to humans, and surely, cannot be valued in a cost-benefit economic way. It is absurd to allow trade rules to trump freedom from cruelty or torture, when for example there are conflicts between animal welfare and free trade


rules. Jurisprudence and moral philosophy have an important role to play in clarifying what is essential in our conduct with our world, whether we talk about our organized political societies or our home-planet. It is true that international human rights law largely ignores questions relating to the protection of animals, since this body of law which is mirroring the foundations of criminal law is deeply anthropocentric. However, there are windows of opportunity for legal scholars to creatively use the existing legal tools available in the human rights world, by highlighting for example that a dignified life which is the cornerstone of human rights legal theory, cannot be conceived fully without the protection of animals and the environment. It is an underlying thesis of this essay, that a dignified life’s prerequisite should be identified as the fair and moral co-existence with other species and the protection of our natural habitat, for the current and future generations.

In order to make my point clearer, consider the case of wars and the disastrous effects on wildlife animals. “It is time to recognize that those who pollute or destroy the natural environment are not just committing a crime against nature but are violating human rights as well.”

Furthermore, Principle 1 of the Stockholm Declaration which established a foundation for linking human rights, health, and environmental protection, is declaring that: “Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being.”

The above-mentioned statements are intended to set the floor for this essay’s discussion, by emphasizing that no reasonable woman could live a life of dignity in an inhabitable environment, destroyed planet, or simply put, in a world where the suffering of animals goes unpunishable by law. This essay argues that an environment of quality, which must include the protection of animal welfare, is a prerequisite for having human rights, ensuring justice and the rule of law; while, all these essentials are threatened to be fully destroyed by climate change; which is another justification for the urgent necessity of developing the field of climate justice.

**MAIN BODY**

**WHAT IS CLIMATE JUSTICE?**

Climate justice is an attempt to serve justice by legally reflecting on global warming as an ethical, legal and political issue, instead of dealing with climate change as – only – an environmental issue. As scholars, lawyers and activists, we engage with climate justice, by linking the effects of climate change to the important ideas of environmental justice and fairness. We do so by examining topics such as equality, human rights, collective rights,

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574 See for example: R. v Minister of Agriculture, Fisheries and Food, ex parte the Royal Society for the Prevention of Cruelty to Animals and Compassion in World Farming Limited, 1995. This case started in the High Court in England and was then referred to the European Court of Justice.

575 “Over the last 50 years, certain species have been vanishing at a very high rate because of wars, with often disastrous effects on the food chain and on the balance of nature.” Anne, Peters, ‘Studies in Global Animal Law, Springer Nature, 2020, p. 172.


intergenerational justice, and the historical responsibilities for climate change, under the flexible, evolving, and inclusive umbrella of climate justice.

A fundamental proposition of climate justice is that those who are least responsible for climate change suffer its gravest consequences, with animals being the less fortunate in this case, since even in the climate justice terrain their suffering is not efficiently acknowledged to date. Confidently, this paper can serve as a small contribution to repairing this continuing injustice, by giving voice to animal rights issues relevant to our discussion.

Climate justice is a form of environmental justice, which in theory means that: All species have the right to access and obtain the resources needed to have an equal chance of survival and freedom from discrimination, or as a minimum requirement, that all living beings are entitled to exist free from harm.\(^{579}\) As a movement, climate justice advocates are working from the grassroots up to create solutions to our climate and energy problems, with the ultimate goal of ensuring the rights of all people to live, learn, work, play and pray in a safe, healthy and clean environment.

The inadequate commitment of academia with climate justice research, must be addressed and counter acted. It is interesting to see the huge difference in the amount of funding that goes to research about climate change denial, than towards climate justice. This could be explained by taking a look at which industries are being negatively affected by climate justice, and who are the holders of capital in our world today.\(^{580}\) It seems to me that one way of moving change is by enriching the international literature with scholarly studies of the highest possible standards, aimed to develop a better, stronger, and more effective climate justice field. Allow me to say that this is an active contribution that academia can achieve, only through collaborations with inter-disciplinary teams of scientists.

To better understand what climate justice entails, it is necessary if not useful to consider the United National Framework Convention on Climate Change\(^ {581}\). The objective of the UNFCCC is to “stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.”\(^ {582}\) While it is important to stress that any attempt to understand what climate justice is, must be introduced in the form of a rights-based approach to climate change.

It is critical to apply a human rights-based approach to guide global policies designed to address climate change. To better understand what could constitute the essential attributes of a human rights-based approach, it would be useful to consider some of the elements described by the Human Rights Council and the UN. For example, the elements of good practices under a rights-based approach includes the following:

- “As policies are formulated, the main objective should be to fulfil human rights.
- The rights-holders and their entitlements must be identified as well as the corresponding duty-bearers and their obligations in order to find ways to


strengthen the capacities of rights-holders to make their claims and of duty-bearers to meet their obligations.

- Principles and standards derived from international human rights law – especially the Universal Declaration of Human Rights583 and the core universal human rights treaties584, should guide all policies and programming in all phases of the process.”585

CLIMATE CHANGE AND HUMAN RIGHTS

We know today that human rights and climate change are linked in numerous ways. This essay highlights the three main ways this interconnected linkage blooms:

1. Firstly, as explained briefly in the prolegomena of this essay: climate change has implications for the real satisfaction of the full range of human rights, especially for the most vulnerable people.

2. Secondly, a failure to act and incorporate human rights into climate action can undermine people’s rights; and activate duties of responsibility.586

3. Thirdly, the integration of human rights into climate change policies can improve effectiveness and result in benefits for people and the planet.

It seems to me that these three key ways are providing us with all the justifications needed to engage with human rights based research in the climate change stadium. Climate change is undermining the fulfilment of a number of internationally protected human rights, like the: rights to health and life; rights to food, water, shelter and property; rights associated with livelihood and culture; with migration and resettlement587; and with personal security in the event of conflict. The worst effects of the ecological drama that threatens to bring the end of human rights are likely to be felt by those individuals and groups whose rights protections are already insufficient. There are many new terminological constructions that are gaining ground in the international literature in the field of environmental crimes, health, and human rights, which, if viewed from the same utilitarian standpoint, share a common essence, and that is the message they all try to communicate, which is that climate change is being caused by human activities and is calling for attributing responsibility to the countries, companies or individuals that have direct links with the caused harms.588 To start grasping the complexities involved in the practice of this field of law, one needs to take a look at the UNFCCC, where terms like “intergenerational justice”, and “historical differentiated responsibility”, have risen.

The underlying questions in this part of my essay, ask:


588 UNFCCC Article 3: “The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed Party Parties should take the lead in combating climate change and the adverse effects thereof.”
• What are the human rights repercussions of climate change, and how does the extensive organization of international human rights law and knowledge convey to that phenomenon?
• Where does international human rights law overlap with or provoke duties under the embryonic climate regime? Where should human rights essentials challenge climate change strategies?

The human rights world is offering us a complete and useful infrastructure of legal procedures, and a well-tested set of legal tools that we can now apply to climate justice, since the relationship of climate change with human rights has gained ground and scientists have provided strong justifications for these claims to be standing strong. For example, the effects of climate change in the enjoyment of the basic human rights of future generations is now indisputable. Nonetheless, the climate change denialists are still in existence, and as it seems, they are better organized (if not better funded and supported) than the advocates for climate justice. It is true that there is a duty upon all academics engaging with this area to counter-argue using stronger scientific arguments and find more effective ways to communicate this knowledge with the world, in order to expose the dangers and double standards of this precarious trend. This could result to real climate action by the political elements of the climate justice field, which are continuing to block the implementation of legal frameworks like the UNFCCC, due to the free market economic and trade rules considerations. In this point, we need to reflect on one of the lessons that Covid-19 has offered to humanity, and that is, by disregarding any economic rules or obstacles, governments and politicians around the world, in fulfilling their duty to protect the public’s health and their right to life, they activated extreme measures, paused their economies, and enforced quarantines. It is interesting to reflect on the hypothesis whether the same line of reasoning should and could be applied to climate justice. The burden of proof in this case, would fall on proving the urgency of the threat on humanity, and whether humankind is facing certain extinction, like climate change advocates declare as modern “Cassandras”. When the predictions and hypothesising are replaced by the death toll rising, like in the case of the current pandemic, its more likely to see real political action harmonised with climate action. The problem however, is that by that time, humanity would have already failed to act for climate, and it will most likely be too little too late!

In resolution 45/94 the UN General Assembly 589 evoked the logic behind the Stockholm590 conference in declaring that: “all individuals are entitled to live in an environment adequate for their health and well-being”. The UN asked its member states to join forces in their struggles for safeguarding a healthier environment. Almost half a century after the Stockholm Conference, the connections that were founded by these opening declarations have been reconstructed and developed in various ways in international legal instruments, presented in decisions of human rights bodies, and the relevant caselaw’s precedent. The common paramount that has utility in our discussion, is that in their majority, these legally valuable data have all been constructed on a rights-based approach to the topics. On that train of thought, we need to understand environmental law, protection and rights, as pre-conditions for the actual satisfaction of internationally guaranteed human rights. For example, it is not rocket science to

590 Ibid 9.
understand that humans cannot survive without clean water, and it is impossible to demand or enjoy your right to freedom of expression when you are dead. Environmental protection is therefore a fundamental device in the delivery and safeguarding of the Universal Declaration of Human Rights.

The majority of human rights law was created before environmental protection became a matter and subject of international concern. For example, the UDHR was created in the aftermath of WWII, and dealt with the known injustices which emerged from the barbarities of war, which can partly explain the lack of environmental protection language in human rights law. The most obvious exception are the rights to life and to health, which are included in many human rights instruments, with some references to the environment. For example: The International Covenant on Economic, Social and Cultural Rights guarantees the right to safe and healthy working conditions and the right of children and young persons to be free from work harmful to their health. The right to health in article 12 of the Covenant expressly calls on state parties to take steps for the improvement of all aspects of environmental and industrial hygiene and the prevention, treatment and control of epidemics and other diseases.

To proceed, it will be useful to consider that human rights and science are both gaining value and becoming the main protagonists in climate change litigation. There is a steady development of the global trends in climate change litigation, which, in practice, has the effect of strengthening the connection between climate change and human rights. There is also an increase in the number of important recent climate change cases, against governments and/or private entities, which have employed rights-based arguments, marking a “rights turn” in climate change litigation. For example, Ashgar Leghari v. Federation of Pakistan was the first case where a human rights basis for litigation on climate change was accepted, notwithstanding the obstacles presented by the problematic causality, and extra-territoriality. In this 2015 case, a Pakistani court produced a ground-breaking decision by accepting claims that it was the government’s failure to address climate change that caused the violations of the claimant’s rights.

The term “climate justice” was originally defined as actual legal action on climate change; it is interesting to see the numbers of the relevant caselaw, which, according to a 2017 UN report, there were, at the time the report was published: 894 identified ongoing legal actions globally.

A human rights basis for litigation on climate change has had increasing significance for courts in caselaw, despite the problems that arise from the need to establish causality. The new lawsuits that recent reports are analysing are also illustrative of these advancements in the process of establishing a causal link between a particular source of emissions and climate-related harms of environmental crimes. Climate change litigation continues to evolve with the demands of our time, and we can observe a continuous

geographic expansion of these legal cases. There are now cases all around the globe, with their majority being filed in the Americas, alongside Asia, the Pacific region, and Europe. It should be noted that no report has managed to provide data about the impacts of climate change litigation in the climate justice project efficiently, which leads us to the conclusion that there is a need for greater assessment and thorough legal research on the effects of these legal actions beyond the courtroom.

The terrain of climate change has an inherent crucial urgency, that justifies the calls for further academic research through a multidisciplinary methodology, as well as for deeper examination of the links between climate change and human rights claims, equity for future generations, as well as of the problems rising from the questions on sustainable development, and the vulnerability principle.

Unlike the international human rights regime, the UNFCCC and the Kyoto Protocol do not include express provisions for remedial measures for individuals, groups of individuals or communities in case of a particular environmental harm. While the UNFCCC includes in its mandate the “protection of the climate system for the benefit of present and future generations of humankind”, it is not designed to offer human rights protection, humanitarian aid or redress to individuals or communities, for environmental harms. From a legal perspective, one could argue that this is the first inadequacy of the law in question, while it is a fact that this law has great problems in practice due to its nonbinding nature, however it generated a number of useful and progressive legally speaking concepts, like: “intergenerational equity”, “sustainable development” and the “precautionary principle”.

It seems necessary to test the assumption that sustainability and climate change policies form a symbiotic relationship. Much of the recent interest in the human rights dimensions of climate change has been sparked by the problems rising from Inuit and the Small Island States. In their 2005 petition the Inuit argued that the effects of climate change could be accredited to acts and omissions of the U.S., and violated their fundamental human rights, such as the rights to the benefits of culture, to property, to the preservation of health, life, physical integrity, security, and a means of subsistence, and to residence, movement, and inviolability of the home. These rights, it was claimed, are protected under several international human rights instruments. Yet, the Commission declined to review the merits of the petition. Notwithstanding the unsuccessful outcome of the petition; the whole legal action managed to succeed in stirring and fuelling the debates over the links between climate change and human rights and led to a “Hearing of a General Nature” on human rights and global warming.

No reasonable legal mind can deny, that the human rights enforcement and complaint procedures can only be beneficial as utensils, in restoring inadequate environmental rights safeguarding: ‘as compared to efforts to incorporate a right to environment in human rights treaties...’ This is a way to escape the obstructions rising from abstract questions such as: ‘what is meant by a healthy environment’ and so on and so forth. As it has been stressed numerous times in this paper, we have in our disposal the know-how, the tools and procedures of the human rights world, which is a better structured body of supporting

598 American Declaration on the Rights and Duties of Man, 1948, OAS Resolution XXX, OEA/Ser.L.V/II.82 doc.6 rev.1.
institutions for the implementation of these rules; and at the end of the day, there is a more efficient way to administer justice, since there is the possibility for victims to file a complaint, be heard, and seek redress, and that is what the human rights international legal body can offer in the climate justice world.

Some legal scholars advocate for the need to re-focus on the procedural and substantive rights and the paramount role they are playing in linking human rights and the environment. In doing so, one needs to look no further than the freedom of information provisions enshrined in Principle 10 of the Rio Declaration and in other human rights instruments, such as Article 10 of the European Convention on Human Rights and Fundamental Freedoms. Substantive rights also provide a legal basis for litigation based on environmental concerns as illustrated by the use of Article 8 (right to privacy) of the European Convention of Human Rights. Even these scholars, however, admit that to speak of ‘a human right to the environment’, is a rather problematic argument, especially when we take into account the ‘balancing it with other human rights’.

It should also be highlighted that human rights appear to have a more evident role in each succeeding rights-sensitive suggestion on climate change. The relevant negotiations of the law-making global organs have developed discussion agendas based predominantly on a utilitarian philosophical basis, and with a consensus built upon a seemingly mutual understanding of the issues in question, which it seems to me are dependent on cost-benefit and other welfare hypothesizing paths, instead of fairness, ethics, and justice. To date, it is observable that the negotiating States have utilized human rights language principally for its normative value, and to boost paradigms of distributional justice, but without admitting its status as applicable positive international law.

Ideally, the current attitudes should employ human rights vocabulary to support a fairer international climate justice system. However, in reality, we still need to work in undertaking an examination of the in-depth specific human rights damages arising from climate change, and to guarantee the inclusion of human rights rules into the relevant climate change law.

At the end of the day, politicians call for human rights in order to move uncertain action on climate change policies, instead of supporting climate justice action in order to prevent human rights costs.

Scanning for human rights language is, undeniably not the strongest tool for analysis and examination, since it is rather a poor diagnostic tool. However, the preliminary findings of such an analytical exercise are indicative of the unjustified absence of human rights dialectal in climate change law, which is a well-established legal structure that as all the evidence suggests, ought to be part of the climate justice regime with a more active role. All the requirements for justifying such an inclusion are present in the climate change phenomenon, for example, the harm to human beings’ rights enjoyment by acts that could otherwise been avoided. Climate change has a human source, since it is partly anthropogenic, and this contributory connection makes climate change an area of study uniquely suitable for human rights assessment. My main argument is that human rights

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601 See: Guerra vs. Italy, no. 14967/89, ECHR 1998.
law is applicable, because the human-made impacts of climate change cause human rights violations. The human rights context redirects the analysis of the phenomenon in its essential effects on humankind, and since climate change is about suffering, is connected with the harm humans are doing to nature, and with more concrete ‘green’ crimes. Numerous populations experience the adverse effects of warming temperatures, yet few solutions have been available to them to date. The human rights regime can offer solutions to these injustices, by providing the raw materials for constructing an inter-connected climate justice legal structure.

In summary, the future of climate justice depends on the inclusion of human rights, green crimes, and animal rights on the table of negotiations. We need immediate action in order to prevent the disaster scenarios. The human rights regime can offer to climate justice the best possible framework for accountability, law-enforcing tools, individual and collective justice claims, and the real and actual implementation of environmental law. Climate change discourse should not be guided solely by environmental law, politics and, in the worst-case scenario, by economic interests. As a human-inflicted harm to other human beings, it must be addressed as bearing responsibility, and in my view, criminal law and ‘green criminology’, could also serve as another path in ensuring and restoring justice in the climate justice arena. If we bring human rights standards into our climate justice’s future development, then it will be easier to identify those that are under threat and how to protect them. Climate change texts show us a myriad of failings in our existing established design, including the lack of human rights mechanisms. Tackling these drawbacks will involve reform of the global policies, from information-gathering and collective decision-making, and from law-making to practice and enforcement, to resource distribution.

According to the Universal Declaration of Human Rights, ‘everyone is entitled to a social and international order in which [their] rights and freedoms ... can be fully realized’. Climate change interrupts this process and the realization and enjoyment of fundamental human rights.

Human rights, by essence and definition, place limits and barriers to what governments and powerful corporations can do. This is what human rights can bring to the climate justice arena and accordingly contribute to tackling, preventing and minimizing climate change’s harmful effects on humankind, our planet and all living beings. This is why we should include in the discussion the relevant animal rights voices, and work towards including these arguments in the legal realm.

Things should be called by their name, and the fact is that today we are witnessing the ultimate violation of the human rights of the most vulnerable people. It has been scientifically proven that the area of climate change has an inherent crucial urgency; that climate change and human rights claims are strongly connected; that equity for future generations is a defining legal principle; as well as the necessity to acknowledge clearly, firmly, and decisively, that the ultimate human rights violation of humankind’s known history will be the only thing ‘flourishing’ due to anthropogenic climate change.

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CLIMATE CHANGE AND ANIMAL RIGHTS

It should be made clear, that climate change is not threatening only humanity. Climate change embodies a unique risk to animal life on planet Earth, caused by a single species: Humans (Homo sapiens) the highly intelligent primates that have become the dominant species on Earth. “It is well-known that humans will suffer greatly as a result of the continuous climate change over the coming decades and centuries, but the calamitous effects on other animals are often downplayed.”\textsuperscript{606} It is important to understand that climate justice does not refer to the natural occurrence of climate change. We know that nature is in a constant path to change, since the time the ancient Greek philosopher Heraclitus, by observing nature, stepped into a constantly changing river, and said the famous philosophical maxim: “Ta panta rei kaiouden menei”, meaning in nature and in life “everything changes and nothing stays the same” it is the natural occurrence and expectable rule of life. However, climate justice is about the damages, harms, and suffering imposed on our planet, and everything that climate entails, like the environment, animals, and non-human animals alike. We need to clarify this, and highlight the necessity to address these legal inconsistencies, and push for the development of climate justice in a fair way, by making sure that we include in all discussions, law-making processes and policies formulations, all affected parties, like animals and non-human animals alike. The problem is that non-human animals, and the environment, do not have a seat on the law-negotiating tables, since only humans have their voices heard in the law-making process; this is why the duty to protect the wellbeing of animals and the environment, falls fairly upon humanity. This is why this essay is putting forward these issues, and dedicates these last pages on animal rights-based considerations relevant to climate justice, to highlight the gap in international law about these issues, and by underscoring the lack of any global regulation, to advocate for the improvement of these inadequacies in the global justice project.

It is not rocket science, to predict that animal health and welfare will be subjected to negative effects and suffering, either directly (e.g. increased risk of heat and cold stress) and/or indirectly (e.g. destruction of suitable habitat, decreasing quantity and quality of food and water, disease, and risk of flood, fire, drought), and so on and so forth.\textsuperscript{607} The present essay, will not discuss any of the issues rising from the normalization of the cruelty-related suffering humans are imposing on animals due to the ways we use them for work, for food, or for any other purposes. In this essay, the main issue to be discussed is the lack of animal rights voices in the climate justice field of study. Climate justice ought to address the speciesism characterizing the majority of human-made laws and justice, and challenge the anthropocentric framework of human rights law, in order to offer alternative ways for the legal tools to improve, evolve and become the ideal, fair rules of law that they were destined to be. It seems absurd having to discuss the reasons and justifications behind such an argument, since law must be free from politically fuelled ideologies or opinions, and aim only to be fair, just and in accordance to the rule of law. In this sense, animal rights-based considerations, and the protection of animal welfare needs no further justifications from a legal point of view. What is needed at this point, is further advocacy, supported by interdisciplinary research, and publications of the highest possible standards in order to stir the

discussions on climate justice, and in that way ensure animal rights-based voices are included in any table of policy designing, of political negotiations, and of law-making processes as part of the development of climate justice and a legal framework. Human rights experts, scholars and advocates, have an extra duty to use their skillset and knowhow in order to assist in the process of including animal rights in the climate justice field. Human rights and climate justice have gained much ground during the last decade, and now, it is time we take a step forward into the future by adding to any human rights based work on climate change, apart from the inclusion of environmental law, the unfairly muzzled animal rights dimension, in order to assist climate justice develop to the fair and equal field that it was meant to be.

Every living being, every animal and non-human animal alike will feel the effects of climate change, since climate change harmfully disturbs both land and water environments. “It is expected that many animals have and will continue to suffer and die from these effects.”

From a utilitarian point of view, since animals can experience suffering, and since this suffering is caused by humans, then humans have an obligation to protect the welfare of animals, and prevent their anthropogenic suffering. Speciesism has no space in justice, and from a critical legal studies standpoint, it needs to be identified when found into law, since it is in violation of the rule of law, justice and fairness. Consequently, any legal rule that was developed according to this philosophical theory, should be removed as ultra vires, in order to repair the injustices that derive from such a legal rule and restore justice for the current and future generations, mirroring climate justice’s mandate.

The legal world should at last, recognize the critical necessity to address and mitigate climate change through approaches including evidence-based policy, legislation, litigation, emission-reducing technologies, and structural changes. Where climate change mitigation strategies pose animal welfare risks, these risks must also be carefully considered, alongside with human rights-based assessments and environmental law’s tools. The common legal practice to date, excluded all animal rights voices, from a rights-based analysis to climate change, but this wrongdoing needs to be addressed and countered, and this essay aims to form a contribution towards this direction. Undeniably, the soft law that animal rights are being developed within offer little resources to a legal researcher, or advocate, but this reality should not deter us from engaging with this kind of research questions. Although there has been some relevant research in the area, mainly for agricultural/livestock animals, the available literature is rather poor, inadequate, and it does not deal with these questions in a holistic way, by including all living beings and animals, that lack the opportunity to have their voices heard.

Nonetheless, the existence of animal rights protecting laws around the world is a reality that fails to include the value of every living being, since these laws are mainly dealing with livestock, companion animals, animals in captivity, or other animals that have been subjected to cruelty and suffering from either hunting or for entertainment purposes, which is a rather narrow view of the animal kingdom and life on earth other than humanity. This is a fault that it is a matter of time to change. The lack of international consensus on these issues, and the absence of international law, is at least condemnable. This is why I

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chose to include these questions in my research and contribute in keeping the debates alive and raising awareness of animal rights.

A promising example is the Universal Declaration on Animal Welfare (UDAW)\(^6\), which is a proposed inter-governmental agreement to recognize that: animals are sentient; to prevent cruelty and reduce suffering; and to promote standards on the welfare of animals such as farm animals, companion animals, animals in scientific research, draught animals, wildlife and animals in recreation.

If UDAW gets endorsed by the UN, just like the Universal Declaration of Human Rights, then it can form the basis or blueprint for the further development of this legal field in the national legal systems and consequently the legal rules it will give birth too, will offer strong positive laws, with set of principles that will acknowledge:

- the importance of the sentience of animals, and
- human responsibilities towards them.

Animal rights are gaining ground in international law, and it is important to highlight that animal welfare is an ethical, legal, and at the same time scientific concept, who’s lack of protection in international law, is at least condemnable. This is a global problem that requires global regulation, and international law is the best possible way to ensure the protection of animal rights by mirroring human rights law.

For example, “the socially constructed boundary between animals and humans has been shifting and seems blurry.”\(^6\) This is an optimistic way of viewing the reality of international animal rights protection, however, the climate justice project offers a great opportunity to push for the legal protection of animals welfare and rights as part of the environmental protective measures and policies that it entails. It is a matter of time for animal rights to be fully protected and respected by the international legal order, and this can only happen through collective climate action and advanced advocacy for animal rights. In conclusion, although there is no hard-law treaty protecting animal rights, there are national laws and NGO’s declarations, which indicates a way forward for international legal scholars. As a closing suggestion, allow me to point out that human rights advocates should join forces with animal rights activists in order to push for positive legal change of the current legal frameworks in the name of climate justice. The role of human rights practitioners, activists and experts in the global discourse around climate justice, requires more detailed inter-disciplinary research, ensuring they learn from each other and play a bold role in the current and future health crises, and thus the development of climate justice. Animal rights exist only as a gap in international law, thus, global animal law regulations could be fairly developed within the fast evolving field of climate justice.

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**CONCLUSION**

Over the past 30 years the European Court of Human Rights has played an important role in “greening” human rights law. It is now well established that environmental damage and environmental protection can be treated as human rights issues. What we as legal scholars need to focus on, is in pushing for positive change in international criminal law while at the same time work to raise awareness of international green crimes.

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International Courts like the ICC and ECHR, have a duty to become the guardians of environmental rule of law, just as much as they need to ensure justice, fairness, and the protection of all life, which includes the protection of environment, because it should be common logic by now, that humans cannot live a life in dignity without “green” in their lives. Climate change will be responsible for the end of human rights if the international community fails to act as fast and effectively, as they did during the challenging times of the Covid-19 pandemic. The seriousness and urgency involved in this arena, is literally a matter of life and death for all parties involved in this essay’s discussion.

There is an urgent need for inter-disciplinary research in this area, in order to produce studies of the highest possible standards, enrich the international literature with papers which should address environmental justice approaches and provide analysis of exposure of different vulnerable groups – like Indigenous peoples; people in poverty; Roma – to environmental and public health harms, based on a rights-based-approach on climate change.

My research on climate justice, human rights and animal rights aspires to illuminate our problematic understanding of climate change, climate justice, and of the harms threatening humanity and future generations, with attributing the necessary respect and value to animal rights considerations. Scholars tend to forget, when dealing with these issues, that the human race is not the owner of this planet and all life forms. Although we tend to conduct ourselves as the entitled owner and protector of this world, we need to keep it real, and acknowledge that the protection we offer is basically against our own kind. Because in the case of climate justice, we do not care about all kinds of natural phenomena or disasters – we care about allocating responsibility on cases where the anthropogenic harms and ‘green crimes’ result to suffering and contribute in the severity of climate change. Like for example, the man-made environmental disasters: The Dust Bowl, Ecocide in Vietnam, Death in Bhopal, Catastrophe at Chernobyl, The Oil Crisis, Dying oceans, Rape of the Amazon, and the list unfortunately goes on and on!

These are harms not only of environmental nature but also of social and legal relevance. Legal experts have a duty to advocate against the manipulation of international law’s principles, or omissions by law-making organs in the international ring. The human rights regime cannot be applied selectively to newly emerging legislation, since it has the mandate of being a superior source of international legal principles. To dismiss human rights arguments from treaty negotiations, when harm on their enjoyment is entailed, is not acceptable by legal theory. Neither to continue with non-binding political agreements, in cases where the threat of harm to humankind is of incalculable magnitude and range. If a new law is found to be infringing human rights, then it is an ultra vires law, and is deemed to be void. There is a great amount of power entailed in the human rights rules, and we need to acknowledge and utilize that force of justice.

Surely, a human rights-based political analysis of the international negotiations on climate change cannot offer direct solutions, however it is necessary to examine them, understand what works and what not, and work harder to empower human rights.

Climate change must be addressed in earnest urgency, for the well-being of humankind and future generations. It is critical to ensure that climate change and justice are reconsidered and conceived in a broader manner, which goes beyond the environmental and economic dimensions that have been central to the existing regime. Giving a central place to human vulnerability, and incorporating the human rights language in climate change law, is crucial. However, what can be distilled from my essay, is that there is a need to widen the scope and
definition of vulnerability, to include all the vulnerable affected parties to this case, like animals and non-human animals alike. This could be accomplished by a wider re-evaluating of differential treatment in the climate change regime, and by ensuring that it better reflects people’s and animal’s vulnerabilities in the future. The need to produce more in-depth human rights research in relation to climate change needs no further justifications. Climate justice is becoming an integral part of the human rights system, and in this co-depended relationship is where this article focused. It seems to me that the only way forward is by fostering the evolution of human rights, by pushing for the necessary changes in the international legal world by for example: mining, deforestation, ocean degradation and all green crimes as violations of human rights, and by allowing the human rights system to foster animal rights claims.

In summary, I examined whether the future of climate justice depends on the inclusion of the human rights regime within its workings, while I attempted to conduct a spherical analysis by considering the arguments for and against such an inclusion. The findings of this research aspire to appeal to legal experts, climate justice scholars, human rights practitioners, and ultimately to contribute to academia, law, philosophy, international relations and global justice, by filling the gap in current knowledge; but the essence of my interest with this topic of research lies also in acknowledging the duty imposed upon all academia, to dedicate our skills and assist the climate justice field of study to gain the intellectual power that is to-date misplaced, and hopefully to witness a reversal of the unjustifiably inactive, or better put, anaemic current state of the international institutional negotiations, and, likewise, to fuel the further dialogues on these matters, by providing well-researched publications.

In closing this paper, I need to add this final reminder to all of us: it is our duty to do whatever we can now to stop emissions both collectively and also on a personal level. By adjusting our lifestyles in respect and harmony to the natural environment that we live in, for example, by consuming less meat, energy, and natural resources, and by realizing the policies and suggestions of the scientific community in relation to renewable technologies. We need to digest that the alternative to these small sacrifices that we are called to take is certain extinction, and no other argument can trump this sentence.

It is interesting to realize that even now, while the world is under the threat of a deadly virus and under the extreme measures imposed on human rights due to the pandemic, some critical legal voices characterized the virus as the cure for racism and the “great equalizer”, due to the indiscriminatory nature of its reach. This is a very interesting way of looking at things and could be proven to be very useful for human rights theory and law. It is true, that through the common response by governments across the globe, citizens accepted that the only way we can mitigate the risks on public health is by accepting the drastic measures of home-isolation, the prohibition of free movement and travel controls, that made the number one consideration in any public policy, the nature, and recognized the fragility of the human condition within the cosmos. So, through these extreme measures we can see the lawmakers and governments, placing nature above any human-made “natural” law implying the superiority of the human race and our natural birth-right to dominate our planet through violence and use of power. The utopia here is not about the idealistic demands for justice, but about the short-sightedness of capitalists to understand that they are also susceptible to extinction, while it makes no sense to produce goods when there will be no buying taking place, (no consumers to consume). The biggest challenge facing humankind today can be summarized in the dilemma of making deep societal and personal changes in order to either evolve or vanish. Scientists –including me— for the last decades have pointed out that climate change is threatening our planet, our existence, and
promoted immediate climate action. However, these recommendations-warnings met a collective denial boosted by climate denialists’ propaganda which as it has been proven has been financed and funded by the big oil companies who have immediate interests to continue to pollute and destroy the planet in the name of extra profit and good business. All the science in the world, was not strong enough to convince the political leaders of our world to take strong and immediate climate action in order to make the necessary changes and protect the public health, human rights, and our planet. For example, going through the development of environmental law, like the famous UNFCCC, we can observe the inadequate commitment of the lawmakers to protect our planet.

Going through history we can observe, that the greatest steps forward for humankind were made after big disasters. Take for example the Universal Declaration of Human Rights who was established after the 2nd World War, because of the barbaric crimes against humanity. Our whole political systems today, are based on ideas of power and violence, however, “If we don’t do things differently, -after COVID- we’re finished”, warns leading naturalist Dr Jane Goodall.

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REFERENCES:

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