INTERNATIONAL ENVIRONMENTAL CRIME: CONCEPT, SCOPE AND POSSIBILITY

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CONTENTS

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I. INTRODUCTION

The early writers of international law were environmentally literate. Grotius, for example, in his great novel, *The Law of War and Peace*, prohibited certain potentially advantageous tactics because of their long-term environmental costs.[1] But, the early writers lived in a pre-industrial era, where it was reasonable to design a public order based on maximum access and use, and minimum regulation. After all, no matter how many wind driven ships sailed the ocean surface, the ocean would not "wear out." The industrial revolution irrevocably changed that reality. International concern about the protection of the environment began to take political form and vector around the middle of the twentieth century, when the consequences of the intensive use of the environment by an industrial and science based civilization became incontestable.[2]

Like the development of international law in other areas, an attempt to formulate some sort of an international regulation with respect to the environment was the result of a perceived necessity for international cooperation to address human needs.[3] This approach, and the legal perspective with respect to the protection of the human environment, has gone through a process of evolution in the last fifty years.[4] Scientific knowledge and technological improvements now give states unprecedented possibilities in terms of learning about environmental problems and combating them.[5] The world has learned that environmental crises can occur on such a large scale as to have international effects. Scientists and politicians cannot agree on the precise causes and implications of, let alone solutions to, such international catastrophes as ozone layer depletion, global warming and species extinction. Nevertheless, there is growing acceptance of the notion that arrogance, ignorance and greed, combined with overpopulation, exacerbated by technology, are responsible for such severe resource exploitation and environmental degradation as to menace the

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See HUGO GROTIUS, THE LAW OF WAR AND PEACE 269, 652-53 (Francis W. Kelsey trans., 1925) (quoting: 'Josephus says that, if trees could speak, they would cry out that since they are not the cause of war it is wrong for them to bear its penalties.)

[2] See LYNTON KEITH CALDWELL, INTERNATIONAL ENVIRONMENTAL POLICY (2d ed. 1990) (stating that a number of publications appearing in the sixties had an "immediate and obvious influence on public opinion"). "The environmental movement has been powerfully affected by the consequences of science misused to the detriment of the living world."

[3] See id. at 45. See also Bo R. Doos, ENVIRONMENTAL ISSUES REQUIRING INTERNATIONAL ACTION, IN ENVIRONMENTAL PROTECTION AND INTERNATIONAL LAW 1, 51 (Winfried Lang et al. eds., 1991) ("(T)he entire environmental issue is in turn linked with other issues. . . . of population, technology, economics, and (issues) of a political, humanitarian, and social nature.").

[4] See Dr. Mahnoush H. Arsanjani, *Environmental Rights and Indigenous Wrongs*, 9 ST. THOMAS L.REV 85 (1996)

[5] Peter H. Sand, *Lessons Learned in Global Environmental Governance*, 18 B.C. ENVTL. AFF. L. REV. 213, 216 (1991).

integrity of the very biosphere, that thin layer of earth, water and air upon which all life depends.

Despite raising public consciousness, diplomacy alone has failed to resolve key environmental problems. The consensus that exists among nations as to what is ecologically "wrong" must be sought in the realm of public international law. In this context my article will explore the concept and possibility of 'International Environmental Crime'. It will demonstrate that states, and arguably individuals and organizations, causing or permitting harm to the natural environment on a massive scale breach a duty of care owed to humanity in general and therefore commit an international delict; an international environmental crime, 'Ecocide'.

In part II of my article, I will discuss why imposing criminal liability as against civil is a preferable option in the case of environmental damage in an international law regime. I will proceed by discussing the functions of criminal law. I will theorize that the functional approach of criminal law in effect has enough substance to support any policy-based preference for criminal liability for environmental damage in a transnational perspective.

Part III will deal specifically with the narrative of international environmental crime. It will focus on the structural analysis of the International Environmental Crime. It will investigate the conceptual position of a possible delict of ecocide while making its specific definitional cum elemental analysis in the backdrop of pure theory of criminal law. In addition, it will also elaborate on the moral basis for the imposition of any such liability. The main focus will be to explain an underlying moral thesis in human rights theory to support environmental criminal liability. However, this approach will not be confined to human rights and will incorporate a general rights thesis as well.

The development of the concept will engender the more pressing questions of a substantive illustration of the given thesis. Therefore, part IV of my article will briefly comment on the Article 8(2)(b)(iv) of Rome Statute of International Criminal Court.[6] This provision is in fact the only example of actual recognition of criminal liability for international environmental damage. My main task here will be to develop a structural analysis of this provision and review its prospects in creating a liability for environmental damage at the transboundary level.

Consequently, I intend to serve two purposes through this article. In the first place it will make a claim that the application of criminal liability is justified in the context of international environmental damage. Secondly, it will establish the existence and ongoing evolution of international ecocide.

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[6] United Nations, Diplomatic Conference of Plenipotentiaries on the Establishment of an Int'l Criminal Court, Rome Statute on the International Criminal Court, U.N. Doc. A/CONF. 183/9 (1998) (adopted by United Nations on July 17, 1998) (visited Aug. 4, 1998) <http://www.un.org/icc> (on file with the Fordham International Law Journal) [hereinafter Rome Statute].

It will argue that ecocide could be considered an international crime, indeed that certain instances of its commission are achieving that status. Criminalization of ecocide will occur because it must. As Bassiouni writes, "the object of the normative proscription of international criminal law is to specify conduct identified as harmful to a given world social interest whose protection is deemed to require the imposition of criminal sanctions on violators and which sanctions are enforced by the member states of the world community through international collective, cooperative or national action."[7]

Despite its reluctance to create new international crimes, a reluctance that is justified by the absence of enforcement machinery, the international community will soon realize that ecocide so menaces fundamental human rights and international peace and security that it must be treated with the same gravity as apartheid or genocide. Precise standards of causation, damage and culpability, and institutions to prosecute and punish offenders, will follow.

Moreover, it is not the author's purpose to propose or speculate upon such standards and institutions. They are secondary to the foundational work of establishing the underlying principles of international environmental crime and proving that international law should apply to ecocide. Similarly, recognition of ecocide may not immediately lead to an international criminal or environmental court. Perhaps the notions of enforcement in an environmentally charged transnational context will be largely different from those we employ in the standard criminal law-oriented contexts.[8] However, these issues are beyond the scope of this article.

II. WHY CRIMINAL LIABILITY FOR INTERNATIONAL ENVIRONMENTAL DAMAGE?

This part of my article will focus on tracing the arguments for putting forth a case for criminal liability in environmental delict of international nature and consequences. I will begin by defining the term 'crime' and outlining the purposes and functions of criminal law. While elaborating on these lines I will adopt a functional approach to connect criminal liability to international environmental damage.

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[7] See M. CHERIF BASSIOUNI, INTERNATIONAL CRIMINAL LAW: A DRAFT INTERNATIONAL CRIMINAL CODE 1 (1980).

[8] In environmental context, the enforcement may mean improved municipal regulation, and cooperation between developed and developing countries through debt relief, ESD-guided aid and investment policies, and technology transfer on concessional terms in return for environmental impact assessment, community involvement in planning decisions and protection of biological diversity.

A. General

Before I address the shape and features of any hypothetical environmental delict that will bring criminal liability in the international context, it is imperative to address a legitimate query: why apply criminal liability to international environmental damage? The concept of liability for environmental damage is neither unique nor novel. Over the last fifty years the issue of environmental damage has been broadly addressed through the civil form of liability, both at the state and international level.[9] Although many states at the domestic level had introduced and enforced criminal liability for environmental damage, this is not true universally.[10] In many countries and parts of the world, environmental damage is still seen and handled as an issue within the civil law regime.[11] Therefore, with these submissions in context, any theoretical exploration of criminal liability for international environmental damage must at the outset build a normative argument for dealing with international environmental damage through the criminal law scheme.

B. Crime and Functions of Criminal Law

A crime is more than a serious tort. According to Glanville-Williams, "the average crime is more shocking, and has graver social consequences, than the average tort."[12] A crime is a public wrong, an act or omission deemed harmful to the interests, not just of the immediate victim, but also of the entire community. It threatens fundamental social values[13]. Crime in effect breaches a duty of care owed to everyone. Compliance with the duty of care is the community's concern, so it forbids the act or omission and punishes perpetrators.[14]

Jurists, considering crime from a legal process perspective, define it as a conduct forbidden by law, for which the government can inflict punishment.[15] Sociologists emphasize the antisocial nature of the act, its relationship to behavior harmful to society as a whole. Both, though,

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[9] See FIONA DARROCH & PETER HARRISON, ENVIRONMENTAL CRIME (1999). Also see Arsanjani, supra note 4 at 86.

[10] Id.

[11] Id.

[12] See Geof Gilbert, *The Criminal Responsibility of States*, 39 INT'L & COMP. L.Q. 345, 347 (1990) (authors' emphasis added)

[13] See Albin Eser, *The Principle of 'Harm' in the Concept of Crime: A Comparative Analysis of Criminally Protected Legal Interests*, 4 DUQ. L. REV. 345, 413 (1965). However, in Western society, typically a crime threatens civil rights to life, personal security, liberty, peace and order, and protection of property.

[14] See Nadelman, *Global Prohibition Regimes: The Evolution of Norms in International Society*, 44 INT'L ORG. J 479 (1990) at 481.

[15] KENNY, OUTLINES OF CRIMINAL LAW at 11.

identify an element of moral outrage on the part of the community against criminals because they have done something "wrong"; they have violated the rules and norms of society. As Lord Simonds stated in Shaw v. DPP,[16] the purpose of criminal law is "to conserve not only the safety and order but also the moral welfare of the state."[17] Crime is therefore that which a society condemns, and criminal law a codification of moral imperatives.[18]

The purpose of criminal law, therefore, is twofold; not only that it preserves safety and order, but also that it projects the moral welfare of individuals.[19] Criminal law emerges for a variety of reasons: to protect the interests of the state; to deter, suppress, and punish undesirable activities; to provide order, security, and justice among the members of a community; to give force and symbolic representation to the moral values, beliefs, and prejud ces of those who make the laws.[20]

C. Criminal Liability for International Environmental Damage: A Functional Analysis

Virtually all of criminal law's distinguishing features derive their force from two of its core concepts: 'moral culpability' and the use of 'criminal sanctions as deterrence'. The criminalization of an otherwise civil regulatory scheme, like environmental law, serves these[21] two reinforcing yet potentially divergent functions. Concern about the possibility of such divergence underlies much of the current debates regarding the proper scope of criminal sanctions in an environmental law regime.[22] I will now briefly touch upon both of these functions of criminal law and sanctions and will relate them to environmental damage.

First, imposition of a criminal sanction makes an important symbolic statement regarding the moral culpability of the transgressor. Conduct subject to criminal sanction is not merely unlawful--it is criminal in

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[16] Shaw v. DPP, 2 All E.R. 446 (1961), A.C. 220 (H.L. 1962) (U.K.).

[17] Id. at 452.

[18] HARRY E. ALLEN ET AL., CRIME AND PUNISHMENT: AN INTRODUCTION TO CRIMINOLOGY 4-8, 14-15 (1981).

[19] Mark Allan Gray, *The International Crime of Ecocide*, 26 CAL. W. INT'L L. J. 215 (1996) at 258-59.

[20] See Nadelman, supra note 14 at 482.

[21] It refers to the two function mentioned in previous sentence: moral culpability and deterrence.

[22] See Richard J. Lazarus, *Meeting the Demands of Integration in the Evolution of Environmental Law: Reforming Environmental Criminal Law*, 83 GEO.L.J. 2407 (1995) [hereinafter Reforming Environmental Criminal Law]; Richard J. Lazarus, *The Reality of Environmental Law in the Prosecution of Environmental Crimes: A Reply to the Department of Justice*, 83 GEO.L.J. 2539 (1995); Richard J. Lazarus, *Assimilating Environmental Protection into Legal Rules and the Problem with Environmental Crime*, 27 LOY.L.A.L.REV. 867 (1994).

character. Criminal prohibitions serve as a formal societal statement regarding the immorality of certain proscribed acts.[23] Therefore, the formal equivalence of a degree of moral legitimacy of environmental violations with criminal misconduct tends to confer upon the underlying environmental requirements.[24] This assignment of immorality may either merely reflect existing social consensus or serve as a stimulus for creating a new consensus regarding the bounds of moral conduct.[25]

A strong case can be made for subjecting environmental violations to criminal sanctions on such moral grounds. The kind of conduct often involved in violating environmental requirements and the kind of harm that results can be virtually identical to that historically subject to criminal punishment. Though in the micro model of liability for crime,[26] the motivation for the violation is often economic, so too is the motivation for many crimes, ranging from armed robbery to embezzlement, and even murder in many circumstances. While the common theme for environmental violations is that the resulting harm occurs through degradation of the environment, that feature does not reduce the magnitude of harm. Quite the opposite is true. Environmental violations may cause catastrophic results to human health and the natural environment (and consequently will harm future generations).

Transnational environmental protection also provides a forceful context for extending criminal sanctions beyond long settled notions of morality. The premise of much state level environmental protection law is that existing behavioral norms pertaining to the environment were flawed, and hence, warranted significant change.[27] The moralizing force of criminal law--which uses criminal law affirmatively to educate the public regarding the immorality of certain behavior in a society--can therefore serve to promote needed change in global attitudes.

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[23] See Henry M. Hart, *The Aims of the Criminal Law*, 23 LAW & CONTEMP. PROBS. 401, 404 (Summer 1958).

[24] This point was underscored at the Fordham symposium when government prosecutors repeatedly emphasized the word "crime" and "criminal" in describing environmental violations, apparently in an effort to capture the moral force of those terms.

[25] See John C. Coffee, *Does "Unlawful" Mean "Criminal?": Reflections on the Disappearing Tort/Crime Distinction in American Law*, 71 B.U.L.REV. 193, 201, 223-233 (1991); see also, Harry V. Ball & Lawrence M. Friedman, *The Use of Criminal Sanctions in the Enforcement of Economic Legislation: A Sociological View*, 17 STAN.L.REV. 197 (1965).

[26] Here I mean crimes in general, like theft, robbery, killing and not environmental crimes specifically.

[27] See Richard J. Lazarus, *The Reality of Environmental Law in the Prosecution of Environmental Crimes: A Reply to the Department of Justice*, 83 GEO.L.J. 2539 (1995)

A second function that criminal sanctions serve derives from their unique ability to deter violations. If we absent effective sanctions for environmental violations, in a civil liability paradigm, noncompliance with environmental requirements is reduced to merely a cost of doing business. Any fines imposed may be passed on by the company to consumers of the company's goods or services in the form of higher prices. Even in the worst case of catastrophic fines, the individual owners and operators may be protected from crippling liability by corporate limitations on individual liability[28] or, if needed, bankruptcy provisions.[29]

The criminal sanction, by contrast, cannot be so easily passed on to others, especially the moral stigma attached to the sanction.[30] Criminal sanctions are uniquely personal and have the capacity to hurt convicts at the site of their most basic interests. The moral stigma of such a conviction can be long lasting and, as a practical matter, in an environmentally literate world, it can destroy the convicted state's, organization's or individual's reputation both within his or her own community and of course, globally. Thus, the threat of personal criminal sanction can prompt far greater compliance by industry than mere civil sanctions.[31] At the same time, the possibility of incarceration cannot be avoided. Where the perpetrators are individuals, or even in cases where they are states and organizations, if individuals can be singled out as key offenders, the actual deterrence value of the sanction rises considerably above the civil liability level.

Therefore, the deterrence function of criminal law can be especially important in the environmental context. Much state environmental law is necessarily preventive in design.[32] The laws seek to prevent irreversible and irremediable harm to the natural environment, the precise magnitude of which is often highly uncertain given the inevitable complexity of ecosystems. It is often quite hard, if not impossible, to put the pieces of an ecological puzzle back together again in the aftermath of serious environmental degradation. Monetary remedies do not address the damage

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[28] See, e.g., *N.L.R.B. v. Greater Kansas City Refrig.*, 2 F.3d 1047, 1052 (10th Cir.1993) (entitling shareholders to rely on the protections of limited liability where they follow the technical rules that govern the corporate structure).

[29] See, e.g., Arlene E. Mirsky et al., *The Interface Between Bankruptcy and Environmental Laws*, 46 BUS. LAW 623 (1991).

[30] See Jerome Hall, *Interrelations of Criminal Law and Torts*, 43 COLUM. L. REV. 753, 756 (1943) (quoting *Atcheson v. Everitt*, 1 Cowp. 382, 391 (1775)).

[31] ENVIRONMENTAL CRIMES ACT OF 1992, Hearing Before the Subcomm. on Crime and Criminal Justice of the House Comm. on the Judiciary, 102d Cong., 2d Sess. 14 (statement of Rep. Schumer); Robert I. McMurry & Stephen D. Ramsey, *Environmental Crime: The Use of Criminal Sanctions in Enforcing Environmental Laws*, 19 LOY.L.REV. 1133, 1158-59 (1986).

[32] See Richard J. Lazarus, *Mens Rea in Environmental Criminal Law: Reading Supreme Court Tea Leaves*, 1996 FORDHAM ENVIRONMENTAL LAW JOURNAL 861, 867

issue. Moreover, natural resource restoration may be an illusory goal. Deterrence, therefore, can be essential to the achievement of the preventive objective of environmental law to prevent such harms, rather than merely to redress harms once they have occurred.[33]

Although, the moral culpability and deterrence functions may be somewhat reinforcing within certain bounds, they suggest differing outer-boundaries regarding the proper reach of the criminal sanction. The deterrence rationale can logically extend far beyond the morality rationale, for example, when the criminal sanction is designed simply to reflect existing social norms of moral culpability; or when the sanction is intended to serve an educational function and thereby affirmatively affect what those social norms are.

In either instance, the deterrence rationale typically turns not on the immorality of the conduct, but instead on the amount and character of the harm threatened, and therefore, warrants prevention of any future occurrences of that harm. The greater the threatened harm, the more valuable the deterrence effect offered by the criminal sanction. Although, conduct risking greater harm may, for that reason, be considered morally culpable, thus warranting deterrence, the primary focus of each rationale for a particular criminal sanction--the moral character of the conduct versus the character and degree of the harm--remains decidedly different. The deterrence rationale finds its equilibrium at a point of optimal compliance.[34] That may or may not mean that the criminal sanctions are themselves triggered by any violation. Because criminal sanctions serve as such effective deterrents, there might be a significant risk of inducing "over-compliance" if such sanctions were triggered by any violation.[35]

As a concluding remark to this section, it must be reemphasized that criminal misconduct is not just a private wrong. It is a crime against society; a delict that involves a certain level of moral culpability along with a requirement of mens rea to pass criminal judgments. Historically speaking, criminal sanctions and regulations have been reserved for the conduct most destructive to the well being of society. The case of environmental damage in an international context, where the harm is not confined to some one society but is felt globally, requires criminal regulation. Here the eagerly desired purpose is not only to punish the culprit, but also to serve the broader goal of deterrence in order to avoid further repetition of the harmful conduct. Besides, it must also be noted that criminal law is more appropriate

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[33] See Lazarus, Reforming Environmental Criminal Law, supra note 22, at 2420-21.

[34] Id.

[35] By "overcompliance," I do not mean to suggest that regulated entities would comply too often in terms of frequency of compliance. "Overcompliance" instead refers to the possibility that regulated entities might reduce pollution even beyond levels society might in fact desire--as reflected in mandated levels of pollution control--in order to guard against even the slight possibility of violating a criminal prohibition and thus subjecting themselves to criminal sanctions.

for redressing violations of absolute duties[36] (as against relative duties in civil law) such as preservation of the environment.

III. INTERNATIONAL CRIME OF ECOCIDE

The international community is becoming increasingly aware of the necessity for committed transboundary environmental regulations that take into account environmental crime. Some instances of transboundary environmental violations are so severe[37] that their scope and effects actually threaten our survival as a species. Such mindless destruction is immoral, an affront to humanity, nature and God. It is also economically and politically self-defeating. The recent growth in the number of international environmental agreements is an indicator of this field's increasing importance.[38] Because of this increased importance, states must focus on creating the most efficient international environmental legal system possible. Therefore, any proposal to criminalize the excesses against the environment at the international level will provide force and symbolic representation to popular condemnation of deliberate environmental destruction.

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[36] Civil law, including civil sanctions, can no longer be fairly characterized as concerned with the mere arbitration of "private" disputes. Civil law is as "public" in its reach and purpose as criminal law. Authorized remedies include punitive remedies, designed not merely to compensate unlawful forced wealth transfers, but to influence social behavior more broadly. Whether or not one ascribes to the view that tort law historically served these purposes at the behest of common-law judges, compare Morton Horwitz, The Transformation of American Law (1977) (arguing that nineteenth-century judges formulated private law doctrine to promote economic growth) with Gary Schwartz, *Tort Law and the Economy in Nineteenth Century America: A Reinterpretation*, 90 YALE L.J. 1717 (1981) (rejecting contention that nineteenth-century judges were influenced by efficiency theory of law in formulating tort doctrine), that such is the purpose of these civil punitive remedies is plain. See John C. Coffee, Jr., *Paradigms Lost: The Blurring of the Criminal and Civil Law Models-- and What Can Be Done About It*, 101 YALE L.J. 1875, 1890-91 (1992) [hereinafter Coffee, Paradigms Lost]; Kenneth Mann, *Punitive Civil Sanctions: The Middleground Between Criminal and Civil Liability*, 101 YALE L.J. 1795, 1798-1801 (1992); Note, *Statutory Penalties--A Legal Hybrid*, 51 HARV. L. REV. 1092 (1938); see also NANCY FRANK, FROM CRIMINAL LAW TO REGULATION: A HISTORICAL ANALYSIS OF HEALTH AND SAFETY LAW 177-95 (1986).

[37] See HUNTER, SALZMAN & ZAELKE, INTERNATIONAL ENVIRONMENTAL LAW AND POLICY, p. 5.

[38] See Fiona Darroch & Peter Harrison, supra note 9 at 435.

A. 'Ecocide'

The term ecocide (or geocide), literally a killing of the earth, is the environmental counterpart of genocide.[39] The term 'ecocide' was first coined to categorize massive destruction of the environment during war, specifically the use of defoliants by the United States in Southeast Asia.[40]

Ecocide is generally defined as the intentional destruction, in whole or in part, of any portion of the global ecosystem.[41] The logic of ecocide, in simpler terms, proceeds as follows: significantly harming the natural environment constitutes the breach of a duty of care, and this breach consists, at the least, in tortious or delictual conduct and, when undertaken with willfulness, recklessness, or negligence, ought to constitute a crime.[42] Therefore ecocide will be identified on the following criteria:

(1) Serious, and extensive or lasting, ecological damage;
(2) International consequences; and
(3) Waste.

Thus defined, the seemingly radical concept of ecocide is in fact derivable from principles of international law.[43] Its parameters allow for expansion and refinement as environmental awareness engenders further international consensus and legal development.

B. Structural Analysis of 'Ecocide'

In this section I will elaborate upon the structure of 'ecocide' on the basis of principles of criminal liability. Generally speaking, crimes bring liability when some sort of physical act (Actus Reus) coincides or interacts with some particularly defined and required form of mental element (Mens Rea).[44] The concept of International Environmental Crimes is complex and challenging because it presupposes the interaction of three specific areas of legal discipline, Criminal Law, Environmental Law and International Law. All of these three areas have a body of rules basic and peculiar to each of them. The question of liability for 'Ecocide' will thus borrow the principles

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[39] Mark A. Drumbl, *Waging War Against The World: The Need To Move From War Crimes to Environmental Crimes*, 22 FORDHAM INT'L L. J. 122 (1998) at 143

[40] Ludwick A. Teclaff, *Beyond Restoration—The Case of Ecocide*, 34 NAT. RESOURCES J. 933 (Fall 1994) at 954.

[41] Lynn Berat, *Defending the Right to a Healthy Environment: Toward a Crime of Geocide in International Law*, 11 B.U.INT'L L.J. 327 (1993) at 343

[42] Id.

[43] ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT: LEGAL PRINCIPLES AND RECOMMENDATIONS (World Commission on Environment and Development ed., 1987).

[44] MODEL PENAL CODE (1962). See generally Michael Moore, *Act and Crime: The Philosophy of Action and its Implications for Criminal Law* (1993); Symposium, *Act and Crime*, 142 U. PA. L. REV. 1442 (1994).

from all three disciplines. However, the issue is not all that simple and has its own ramifications. The difference between an environmental crime in a domestic setting and an environmental crime in an international law regime will be significant. In an international law regime a whole new set of questions is posed which may not even exist in a micro model, and the simplest of them may be a question relating to jurisdiction.

However, at this point I will only elaborate upon those concepts that are central to the structure of crime. In general, a crime contains two components: an 'actus reus' (physical element) and the 'mens rea' (mental element).[45] I have identified that the elements of international environmental crime conform to the same pattern: a physical element in form of damage, and a mental element. Beside these main elements, I have also added perpetrators of ecocide to this list of key concepts to further enhance our understanding of international environmental crime.

1. *Physical Element: Damage*

The physical element for ecocide is based upon ecological damage which is both serious and either extensive or lasting. The proof of damage per se will constitute the actual actus reus requirement of environmental crime. The dumping of oil in the Persian Gulf will be a simple example of this requirement of damage per se.[46] Independent of the damage to Kuwait and to the Persian Gulf waters, it is estimated that the oil well fires set by Iraqi soldiers expelled one to two million tons of carbon dioxide, which in 1991 represented one percent of total global carbon dioxide emissions.[47] Under my proposed regime of international environmental crime, this contamination of air, water and environment will be equivalent to the requirement of specific act in the pure theory of criminal law. It is indisputable that at the international level where damage to the environment must be aggravated enough to meet the criteria of ecocide, and where actors may be states, groups of individuals or organizations, it will be an otherwise difficult task to locate the commission of a specific act which causes damage. Therefore, the criteria in my opinion should be changed to focus on damage, as it will further facilitate the requirement as to the presence of a mental element by paving the way for the introduction of an argument to impose responsibility on the basis of strict liability. On the other hand,

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[45] JOSHUA DRESSLER, CASES AND MATERIALS ON CRIMINAL LAW (2nd Edition) at p.111.

[46] *Public Authority for Assessment of Compensation of Damages Resulting from Iraqi Aggression*, OIL AND ENVIRONMENTAL CLAIMS BULLETIN (Aug. 1997). Independent of the damage to Kuwait and to the Persian Gulf waters, it is estimated that the oil well fires set by Iraqi soldiers expelled one to two million tons of carbon dioxide, which in 1991 represented one percent of total global carbon dioxide emissions.

[47] Id at 8

interestingly, this replacement of specific physical act with damage per se can be extended to include the act of exposing the environment to any situation that may cause a substantial harm in future.[48]

However, this damage must contain the following two characteristics. In the first place, this damage must be serious and wasteful; second, the consequences and aftereffects of this damage should be felt internationally. I will also briefly touch upon the question related to the location of the crime, though I understand that it may cause potentially difficult questions related to criminal procedure that are beyond the scope of my paper. Therefore, I will restrict the discussion to the basic substantive requirements of ecocide.

a. *Seriousness and Wastefulness*

The requisite seriousness for ecological damage can arise from either the scale of the harm and the numbers of people and species ultimately affected, or its impact on people in terms of social and economic costs, or loss of unique natural assets. This requisite significance can lie, on the one hand, in vast geographical coverage or a large number of forms of damage[49], or on the other hand, in the difficulty, unlikelihood or even impossibility of reversing it —for example, conditions met by major river damming and diversion. These criteria are admittedly somewhat subjective, but generally acceptable standards could evolve through adjudication.

Ecocide consists of deliberate acts and policies which governments, individuals and organizations perform and pursue knowing the harm they cause and the alternatives available. These acts and policies usually produce nothing of benefit to society--although they often greatly benefit a profiteering minority--and if there are social benefits they are greatly outweighed by social costs. Ecocide squanders precious resources, precludes efficient alternatives and widens wealth disparities. It is unproductive, unsustainable and misguided. It is wasteful. As already mentioned, an obvious case is Iraq's igniting of Kuwaiti oil wells during the Gulf War.[50] In

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[48] This kind of liability in environmental backdrop could be very important and useful as it will allow the responsible party to make efforts towards preventing the causation of actual damage. I am not sure but perhaps a liability on a provisional basis can be introduced.

[49] As I mentioned earlier, the case of Iraqi aggression against Kuwait involved damage in different forms such as waste of oil, pollution of environment and air, contamination of water, wasteful exploitation of sources, deprivation of natural resources, etc. For detailed discussion, please see *Public Authority for Assessment of Compensation of Damages Resulting from Iraqi Aggression, Oil and Environmental Claims Bulletin* (Aug. 1997)

[50] See Betsy Baker, *Legal Protections For the Environment in Times of Armed Conflict*, 33 VA. J. INT'L L. 351 (1993), Also See *Public Authority for Assessment of Compensation of Damages Resulting from Iraqi Aggression, Oil and Environmental Claims Bulletin* (Aug. 1997).

contrast, rain forest destruction, toxic waste dumping and unsustainable fishing practices result from a complex mixture of political, economic and social factors, and difficult decisions are required to stop them.[51] They are nevertheless neither inevitable nor necessary.

b. *International Consequences*

The environmental catastrophes mentioned so far in this article, demonstrate the three ways in which ecocide's requirement of international consequences can be satisfied. They threaten significant interests and values of the global community, including life, health and resources vital to both. Citizens of more than one state number among their victims and perpetrators. Political, social, economic and technological considerations mean they can only be halted, reversed or prevented from recurring through international cooperation.

c. *Place of Crime*

Because ultimate effects of the damage caused by ecocide are felt internationally, for example in an increase of skin cancer, tropical storms and species extinctions, it does not matter to the analysis of ecocide--except as to standing i.e. Locus Standi--whether the material damage proximate to the act or omission occurs within the perpetrator's national territory, another state, or the global commons beyond national borders. At the domestic level, the requirement of a court to have jurisdiction over the crime determines the factual importance of the place of crime. Whereas in a macro model, the successful application of ecocide assumes that there is an international criminal court, which has jurisdiction over all the states and other international actors. Therefore, a question as to jurisdiction may not arise as such, unless of course, that court is further divided into different benches responsible for different parts of the globe. However, this question does not demand immediate resolution.

2. *Mental Element: Proof of Intentionality*

In criminal law what makes conduct more or less morally culpable turns, in the first instance, on the actor's state of mind.[52] The more culpable the

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[51] See Mark Allan Gray, *The United Nations Environment Programme: An Assesment*, 20 ENVTL.L. J 291 (1990)

[52] United States v. United States Gypsum Co., 438 U.S. 422, 436 (1978) (stating that criminal liability has not traditionally extended to nonintentional, negligent conduct); 2 HENRY D. BRACTON, ON THE LAWS AND CUSTOMS OF ENGLAND 290 (S. Thorne trans., 1968); 3 SIR EDWARD COKE, THE INSTITUTES 107 (Garland Publishing, Inc. 1979) (1628); Francis B. Sayre, *Mens Rea*, 45 HARV. L. REV. 974, 982-87 (1932). See generally Martin R. Gardner, *The Mens Rea Enigma:*

state of mind, the harsher the corresponding punishment ought to be. Culpability in this context turns on the defendant's purpose, the extent of the defendant's knowledge of the circumstances surrounding her conduct, the conduct itself, its results, and the reasons for the defendant's behavior.[53] Therefore, in the backdrop of environmental damage, the ability of the crime to encompass negligent or willfully blind conduct is particularly important. Proof of intentionality, however, can be difficult to establish. In this regard, lessons can be learned from the domestic context. In North America, environmental wrongdoing is generally prosecuted as a public welfare offense and normally based on a 'negligence' standard. In the absence of legislative intervention to couch environmental desecration as a "civil offense," positioned between criminal and public welfare law, it would be difficult for the law to serve as a deterrent to individuals misusing the natural environment. Given these lessons from domestic law, we ought to reevaluate the merit of collapsing environmental wrongdoing within a criminal context geared to prosecute humanitarian pariahs on an intentionality basis. Pressing policy considerations of preserving the integrity of the environment for future generations militate in favor of attaching liability at a lower standard. As a result, it would be important for the effectiveness of the ecocide provision to capture not only the mens rea standard of criminal law, but also negligence, reasonable foreseeability, willful blindness, carelessness, and objective certainty standards, many of which animate tort law and civil liability. By way of example, were a willful blindness standard to operate, then the nonfeasance of the authorities who maintained the nuclear reactors involved in the Chernobyl disaster could be categorized as ecocide. Lynn Berat[54] concludes that:

> "There is substantial evidence that although Soviet scientists and governmental officials were aware that the Soviet nuclear power plant design was flawed and had the potential for causing unmitigated disaster, they persisted in maintaining old plants and built new ones without design modification."[55]

Observations on the Role of Motive in the Criminal Law Past and Present, 1993 UTAH L. REV. 635.

[53] The Model Penal Code provides for four different possible criminal states of mind, corresponding to varying degrees of culpability--purposeful, knowing, reckless, and negligent. Model Penal Code § 2.02(2)(a)(i), 2.02(2)(b)(ii), 2.02(2)(c), 2.02(2)(d) (1962). Differing mens rea may apply to different elements of the offense, including relevant circumstances, result, and conduct. See id. § 2.02(2). For critical analyses of the Model Penal Code's approach to mens rea, see Paul H. Robinson & Jane A. Grall, *Element Analysis in Defining Criminal Liability: The Model Penal Code and Beyond*, 35 STAN. L. REV. 681 (1983); Kenneth W. Simons, RETHINKING MENTAL STATES, 72 B.U. L. REV. 463 (1992).

[54] See Berat, supra note 41 at 330

[55] Id at p. 345.

a. *Strict Liability*

As explored above, responsibility for ecocide could be based upon strict liability. This standard would best encourage preventive behavior, advance the "polluter pays" and "precautionary" principles,[56] and simplify issues of proof of knowledge, intent and causation. In domestic settings, many environmental crimes are those of strict liability.[57] This means that the prosecution does not have to prove that the defendant acted with any particular state of mind.[58] What the defendant meant or did not mean to do is irrelevant.[59] Provided the prosecution can prove that the factual ingredients of the offence have occurred,[60] then there will be no distinction between whether the defendant, acting or failing to act in breach of law, did so entirely deliberately, in a calculated manner, or wholly inadvertently in fact, while doing his best to stay within the law.

This relaxed criteria for mens rea has certain advantages to it. It will save the prosecution from the need of proving facts necessary to establish 'beyond a reasonable doubt' criteria of a mental element—a more demanding form of mens rea. Subjective knowledge and individual purpose are inherently difficult to establish. The best source for evidence of the requisite culpable knowledge and purpose is inevitably the very individual, the defendant, who in the case of international delict will be difficult to single out, and even if that happens, who may be expected to deny the existence of any mens rea. Relaxing mens rea, therefore can dramatically improve the prosecution's chance of success. This is true for crime in general. Indeed, it is especially so for environmental crime, at least where those violating environmental regulations are states and large corporations where individuals making decisions may seek to remain willfully ignorant. However, I do not rule out the possibility that there are evidentiary doctrines and methods of circumstantial proof that can be used effectively to

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[56] The "polluter pays" principle provides that those generating pollution and waste should bear the costs of containment, avoidance or clean up. The resulting internalization in products of their cost to the environment means that such costs are reflected in prices and ultimately borne by the consumer, who will then be more likely to favor products whose creation impacts less severely upon the environment. The "precautionary principle" provides that, where there are threats of serious or irreversible environmental damage, lack of scientific certainty should not mean the postponing of measures to prevent environmental degradation. This shifts the burden of proof to those claiming their activities do not harm the environment and thus encourages use of the best available technology in advance of conclusive scientific determination of a causal link.

[57] See Fiona Darroch & Peter Harrison, supra note 9 at 330.

[58] R v. Sandhu [1998] 1PLR 170.

[59] Id at 172

[60] Id.

overcome such cognitive and institutional barriers to the proof of mens rea.[61] Still, at this early stage of enforcement of ecocide, I would recommend that such criteria of burden of proof be avoided.

b. *Fault*

Though, in my opinion, the application of strict liability theory for ecocide in transboundary contexts is a preferable approach, it is not without merit to consider the possibility that ecocide can be based on fault. The incorporation of fault as a mental element will assume the inclusion of a variety of mens rea levels, such as wilfulness, knowledge, recklessness and negligence.

The act or omission can be wilful, such as the deliberate destruction of endangered species habitat or illegal use of driftnets, or failure to act to prevent them; reckless, as in exploiting resources or lending development funds without regard for the known or foreseeable risk of destruction; or negligent, as in undertaking inappropriate development projects or improperly regulating development. Even if legal under municipal law, the act or omission constitutes a breach of a duty of care owed to humanity in general and arising from a treaty, customary international law or another generally accepted international obligation.

c. *Foreseeability*

Development of the precautionary principle[62] should eventually make it possible to argue that fault can arise from knowledge or failure to realize, where it was reasonable to do so, that the act or omission was wasteful and would produce its immediate effects, such as destruction of particular species or resources, without appreciation of the ultimate harm to global interests. International law's current state of development requires, for the existence of ecocide, knowledge or unreasonable failure to realize that the general scientific consensus is that the act or omission causes or contributes significantly to global environmental impairment, such as ozone layer depletion, climate change or destruction of biological diversity, with deleterious consequences[63] for health, property and economic and spiritual interests. This absolute foreseeability requirement has important implications for the identification of perpetrators, as few actors other than states possess the requisite knowledge.

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[61] Liparota v. United States, 471 U.S. 419, 434 (1985) (commenting on the ability of the government to prove by circumstantial evidence the defendant's knowledge of their conduct's culpability); United States v. MacDonald & Watson Waste Oil Co., 933 F.2d 35, 55 (1st Cir.1991) (willful blindness instruction).

[62] See notes under supra note 56.

[63] See Hunter, Salzman & Zaelke, supra note 37 at 3-6

3. *Perpetrators of the Crime of Ecocide*

This part will look into the possible perpetrator(s) of the crime of ecocide. Under the international law the main categories of actors recognized for liability are mainly states, organizations and individuals.[64] Although liability can be imposed on a group of individuals such as belligerents,[65] terrorists,[66] etc., here I will only elaborate on the liability that could be imposed on these three main actors.

a. *States*

Under any theory of International Law, states are the main actors.[67] States commit ecocide when their activities or policies, or their unreasonable failure to regulate activities within their jurisdiction or control, directly cause or permit ecological damage that meets the criteria outlined above. States are responsible for acts and omissions committed on their behalf or under color of their authority by government officials, organs and enterprises.[68] Where the acts are performed by individuals or entities which, though private, are under state jurisdiction or control, state responsibility is neither vicarious nor complicitous; it arises directly from the failure to prevent or abate those acts through administrative and legislative guidance, regulation, enforcement and punishment.

Ecocide can arise from inappropriate planning and development policies in which environmental impact assessment is rhetorical or marginal, and from the absence or inadequacy of protective administrative or legislative structures. It is the delictual refusal to incorporate the recognition and safeguarding of essential interests of the international community into national policy. Contributing to it is a lack of government leadership in raising and heeding domestic environmental consciousness, and in cooperating with other governments to solve international environmental problems jointly.

Where economic and political circumstances limit the options of less developed countries, they do not necessarily commit ecocide in attempting rapid but ecologically destructive industrial development. They may do so, though, where they incorrectly (the author submits) insist that the balance between environment and development is entirely a sovereign national concern, regardless of international consequences, and where they accordingly refuse international assistance and encourage others to do the

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[64] See IAN BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW, 1998 (5th Ed.) at p.57.
[65] Id at 63.
[66] Id. Also see CHEN, THE INTERNATIONAL LAW OF RECOGNITION (1951) at p.303.
[67] Id at 57, 59.
[68] Id at 436-440

same. Conversely, developed countries can commit ecocide by contributing to environmental destruction in less developed countries through facilitation or inadequate regulation of harmful activities by their agents. Especially egregious are unsustainable development assistance projects, which enrich the donor or its domestic interests, or constitute relocation of polluting industries under the guise of investment and technology transfer. Just as damaging may be projects run by multilateral agencies and negligently overseen by donors.

b. *Individuals*

In addition to rendering their states liable for ecocide through their actions and omissions committed in an official capacity or under color of authority, individuals will, with the development of international law, be seen as committing ecocide in their own right. They will do so independently of their states or, acting officially or with their states' knowledge and unreasonable failure to intervene, simultaneously; in either case they will be responsible qua individuals. This paper does not seek to establish that individuals do commit ecocide under current international law, only that a basis for their responsibility exists.

The International Court of Justice (ICJ) held somewhat tautologically in Reparation for Injuries[69] that a "subject" of international law is an entity capable of possessing international rights and duties and of maintaining its rights by bringing international claims.[70] Many publicists have observed that international law grants rights and imposes duties on individuals, and that there is no rule establishing that individuals are not subjects of international law.[71] Narrow recognition of individual responsibility under international law[72] and ecocide's serious damage and absolute foreseeability requirements nonetheless limit the scope for individual commission. Possible culprits are senior politicians and government officials in states where ecocide-type harm occurs or which have jurisdiction or control over corporations and multilateral development banks causing the harm, executives of those corporations and banks, and highly influential individuals running harmful projects or investing in them on a large scale.

c. *Organizations*

Although many entities, national and international, private and public, knowingly play a direct role in cases otherwise meeting the criteria set out

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[69] Reparation for Injuries Suffered in the Service of the United Nations, 1949 I.C.J. 174 (Apr. 11).

[70] Id. at 179

[71] See Ian Brownlie, supra note 64 at 37-67, 581.

[72] See MALCOLM N. SHAW, INTERNATIONAL LAW 178-81 (1991).

above, only a few have international legal personality, cause sufficient damage, and meet the absolute foreseeability requirement so as to be culpable for ecocide.

If corporations were recognized as having international legal personality, obvious culprits would be those running destructive and inefficient rainforest logging operations, defying legislation, restricting cutting, and exporting and importing while evading local taxes; fishing interests maximizing profits through illegal catches or techniques; industrial and pharmaceutical manufacturers ignoring restrictions on plant collection and eradicating species instead of harvesting them; transporters of oil and toxic substances in unsafe vessels; and utilities generating power with faulty or improperly run nuclear facilities. Other corporate candidates would be hamburger chains buying rain forest beef at artificially low prices to increase profit margins infinitesimally; companies spouting "green" rhetoric while bribing officials, threatening opponents and disregarding planning and pollution controls; suppressors of more efficient industrial or energy producing processes which threaten their monopolies; and, finally, the banks financing it all.

Multilateral development banks could be seen as committing ecocide by sponsoring unnecessary mega-projects and failing to integrate environmental considerations into their economic planning, instead of fulfilling their mandate to assist ecologically sustainable development and exerting their influence over host governments to encourage environmental impact assessment. Particularly troubling examples are the ongoing forest fires in the Amazon Basin and in Indonesia. In both cases, there is compelling evidence that these fires had been deliberately set by enterprises seeking to clear the forests for economic development.[73]

Multilateral development banks, certain international associations[74] and governmental groupings,[75] and United Nations agencies[76] are recognized as having international legal personality.[77] They, and, with refinement of the ecocide concept and recognition of a wider range of subjects of international law, other kinds of organizations such as interest groups, which indirectly

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[73] See Randy Lee Loftis, *The Tropics Are on Fire*, TORONTO STAR, June 6, 1998, at C6 (stating that "evidence shows that settlers were being paid by large corporations to burn forests to convert land into corporate-owned palm or rice plantations").

[74] See BARBARA J. BRAMBLE & GARETH PORTER, NON-GOVERNMENTAL ORGANIZATIONS AND THE MAKING OF U.S. INTERNATIONAL ENVIRONMENTAL POLICY, IN THE INTERNATIONAL POLITICS OF THE ENVIRONMENT: ACTORS, INTERESTS, AND INSTITUTIONS 313, 341-46 (1992) (outlining the failure of the International Tropical Timber Organization to replace the current free trade regime with sustainable logging programs).

[75] For example, the OECD, the European Union, the Group of Seven Industrialized Nations and the Organization of African Unity.

[76] See Mark A. Gray, supra note 19 at 291

[77] See Brownlie, supra note 64, at 37-67, 680-707

cause the requisite damage through self-interest or a neglected mandate, could be identified as culprits.

C. Rights Violated: Moral Basis for Criminal Liability for International Environmental Damage

In this section I will demonstrate that certain instances of environmental destruction breach an international duty of care, largely through the violation of internationally recognized human rights. This does not advocate their extension to new human rights or to non-human beneficiaries; but it will consider emerging rights: to a healthy environment and to development, as well as rights of non-human entities.

Ecocide can be established on the basis of the two most fundamental human rights alone: the right to life and the right to health. By diminishing, for example, earth's vital and stressed capacities to produce oxygen, food and medicines, to block harmful radiation and to maintain stable climates and the often-fragile social, political and economic orders that depend upon them, culprits contribute directly and substantially to causing individual deaths in less developed countries, impairing human health globally and even threatening the survival of the species.[78] The destruction and its effects, however, contribute to the violation of other rights throughout the developing world: security of the person; protection of the family and property; freedom from hunger; social security; an adequate standard of living; and a safe work environment; as well as human dignity, infringed along with cultural and religious rights in the case of aboriginal people by the destruction of their societies, institutions, livelihoods and identities, and in the case of people everywhere by the severing of spiritual and aesthetic links to wilderness and the diminution of humanity as a part of nature.[79] It can be argued that equality rights are violated, both as between peoples within an affected country, viz., disenfranchised indigenous people and rural poor as compared to unaffected or benefiting urban elites, and as between those in less developed countries who gain no benefit from the exploitation of their resources but suffer the effects of impoverishment and those in developed countries who grow correspondingly rich without making sacrifices. It may also be that two collective rights are threatened: aboriginal self- determination, and everyone's right to a social and international order in which all other rights and freedoms can be fully realized.

Two so-called "third generation" or "solidarity" rights are to a healthy environment and to development.[80] Neither is fully accepted under

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[78] See Doos, supra note 3, at 1, 3.

[79] See Arsanjani, supra note 4 at 85.

[80] See Human Rights Based on Solidarity, G.A. Res. 148, U.N. GAOR, 44th Sess., Supp. No. 49, at 226, U.N. Doc. A/44/49 (1990); Noralee Gibson, The Right to a Clean Environment, 54 Sask. L . Rev. 5 (1990) (discussing the elaboration of a right

international law; but both are emerging as recognized interests which could eventually gain human rights status if, as has been predicted, eastern concepts of duty and community rights seize a larger role in the development of international human rights law.[81] A right to enjoy and use a healthy environment, one that is clean, ecologically balanced and protected, and whose physical, social and cultural elements are adequate for both individual well-being and dignity and collective development, can be seen as necessarily underlying all other rights.[82] A right to development, entailing a sustainable and constantly improving livelihood for a particular population, would be both a basis for realization, and the evolutionary outcome, of all other rights.[83]

While ecocide can be proven on the basis of internationally recognized human rights, it is worth briefly exploring the status of interests held by non-human entities and harmed by activities otherwise--and perhaps eventually accordingly--constituting ecocide.

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to a healthy environment and an explanation of the three categories of human rights: civil and political; economic, social and cultural; and solidarity or collective). First generation rights--those protecting individual freedoms against state intrusion--have been analogized to the French Revolution's "liberte," second generation rights--those associated with welfare state obligations--to "egalite," and third generation collective rights to "fraternite" or "solidarite." Stephen P. Marks, *Emerging Human Rights: A New Generation for the 1980s?*, 33 RUTGERS L. REV. 435, 441 (1981). See Philip Alston, *A Third Generation of Solidarity Rights: Progressive Development or Obfuscation of International Human Rights Law?* 29 NETH. INT'L L. REV. 307 (1982). A right to a healthy environment can be seen as both individual and collective. J. Waldron, *Can Communal Goods Be Human Rights?* 28 EUR. J. SOC. 296 (1987).

[81] See W. Paul Gormley, *The Legal Obligation of the International Community to Guarantee a Pure and Decent Environment: The Expansion of Human Rights Norms*, 3 GEO. INT'L ENVTL. L. REV. 85, 95-105 (1990). See also AFRICAN CHARTER ON HUMAN AND PEOPLES' RIGHTS, OAU Doc. CAB/LEG/67/3/Rev.5 (1981), reprinted in 21 I.L.M. 59 (1982) (specifying specific rights and duties) (hereinafter African Charter).

[82] Janusz Symonides, *The Human Right to a Clean, Balanced and Protected Environment*, 20 INT'L J. OF LEGAL INFO. 24, 28-29 (1992). This author argues that this right "is already well- established." Id. at 39. Berat maintains that it has become part of customary international law. Berat, supra note 41, at 3.

[83] Russel L. Barsh, *The Right to Development as a Human Right: Results of the Global Consultation*, 13 HUM. RTS. Q. 322 (1991) (discussing recent U.N. activities and General Assembly resolutions concerning the emerging right to development and explaining that it is not so much a right to improvement in material conditions as local empowerment through rights of participation and consultation in economic and social decision-making).

States have rights as against other states that are the source of transboundary pollution.[84] While this paper does not concentrate on states as victims of ecocide, their rights under international law are essentially held on behalf of their citizens[85] and therefore form part of the analysis below. Any state can claim a legal interest in ecocide destruction. In particular, less developed countries robbed of their development potential by environmental degradation could eventually be considered ecocide victims with recognition of a collective right to development.

However, this claim as to the violation of environmental rights is not limited solely to the people. Radical theorists argue for recognition of legal rights of nature or the "environment,"[86] which includes non-living elements. Others limit their claim to living things[87] or specifically to animals.[88] A convincing argument, for instance, is made that whales have an emerging right to life, which right will gain recognition if statist and positivist conceptions of international law give way to humanist and natural law conceptions.[89] Such rights do not currently enjoy recognition under international law.[90] Nevertheless, every element of nature is unique and has

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[84] Theorists like Kelsen see the state as comprised of individuals, the true and sole subjects of international law. State rights and duties are therefore really individual rights and duties.

[85]. Id. Also see J.G. STARKE, INTRODUCTION TO INTERNATIONAL LAW 59 (1989). Note, however, the dictum of the Permanent Court of International Justice. "It is an elementary principle of international law that a State is entitled to protect its subjects, when injured by acts contrary to international law committed by another State, from whom they have been unable to obtain satisfaction through the ordinary channels. By taking up the case of one of its subjects . . . a State is in reality asserting its own rights--its right to ensure, in the person of its subjects, respect for the rules of international law." MAVROMMATIS PALESTINE CONCESSIONS (Jurisdiction), 1924 P.C.I.J. (Ser. A) No. 2, at 12.

[86] See CHRISTOPHER D. STONE, SHOULD TREES HAVE STANDING? TOWARD LEGAL RIGHTS FOR NATURAL OBJECTS (1974); James A. Nash, *The Case for Biotic Rights*, 18 YALE J. INT'L L. 235 (1993).

[87] See G.E. Varner, *Do Species Have Standing?*, 9 ENVTL. ETHICS 57 (1987).

[88] See PETER SINGER, ANIMAL LIBERATION (1975).

[89] Anthony D'Amato & Sudhir K. Chopra, *Whales: Their Emerging Right to Life*, 85 AM. J. INT'L L. 21 (1991). But Cf. Holmes Rolston, *Rights and Responsibilities on the Home Planet*, 18 YALE J. INT'L L. 251, 257-59 (1993) (arguing that while animals have intrinsic values that may form the basis for a human ethic, they do not possess "rights" per se).

[90] Juristic bases for environmental protection will be much strengthened at such time as these rights are recognized because basing that protection upon human rights and needs entails unfortunate compromises. See D'Amato & Chopra, supra note 26, at 50-61. Note that, although the author foresees international legal recognition of rights of nature, there is vigorous debate about whether conventional legal and moral arguments can support such rights. See, e.g., John Livingston, *Rightness or Rights?*, 22 OSGOODE HALL L.J. 309 (1984). James W. Nickel, *The Human Right to a Safe Environment: Philosophical Perspectives on Its Scope and*

inherent dignity, and therefore warrants respect regardless of its value to man. Being different from humans does not mean being less worthy of respect. All living things are vulnerable and, in the case of fauna, sentient, and therefore deserving of protection.

Besides, these interests are also relevant to our human-rights based model of ecocide, as their impairment affects man. Fundamentally, the cohesion and interdependence of all living things mean that we are harmed as a part of nature (much as a state's right to complain about transboundary pollution is really the collective right of its citizens). As one publicist put it, "the integrity of nature is also the integrity of the human species as part and product of nature."[91] To destroy nature is to destroy ourselves.

IV. CRIMINAL LIABILITY FOR ENVIRONMENTAL DAMAGE UNDER INTERNATIONAL LAW: STANDARDS NEGOTIATED SO FAR

International environmental cooperation at the level of criminal enforcement could be described as being in a state of infancy. Definitional terms and customary norms with respect to conditions necessary for prosecution are beginning to emerge from the Treaties and Conventions, which specifically address environmental crime. States are beginning to create a climate[92] which will foster cooperation at the transboundary level, which is essential to deal with the global environmental challenges presented by the globally trading community. This part of my paper will briefly discuss the Article 8(2)(b)(iv) of the Rome Statute of the International Criminal Court[93]. This provision of the Rome Statute provides the basis on which criminal liability can be imposed for environmental damage. I have divided this part into two sections. The first section will remark on the possibility of environmental crime with reference to standards achieved under the Rome Statute. Although the statute does not speak of environmental crime in its own right, it imposes criminal liability for environmental damage by making such an act a culpable war crime. I will bifurcate the said provision to analyze its composition as to the structural pattern of ecocide already described in part III of this paper. Further in the second section of this part, I will critically review the possibility of criminal liability for environmental damage under this provision of Rome Statute.

Justification, 18 YALE J. INT'L L. 281-82 (1993) (arguing "rights should not be the dominant normative concept of environmentalism. It is better to phrase most environmental discourse in terms of environmental goods, of respect for and responsibilities towards nature, and of obligations to future generations.").

[91] See Nash, supra note 86 at 249.

[92] For specific examples, please see BASEL CONVENTION ON THE CONTROL OF TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND THEIR DISPOSAL; ALSO SEE CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

[93] See supra note 6.

A. Direct Criminal Liability For Environmental Damage: Rome Statute of the International Criminal Court, Article 8(2)(b)(iv)

Under the language of the Rome Statute, intentional infliction of harm to the environment may constitute a "war crime."[94] Article 8, which defines "war crimes", however, limits the jurisdiction of the International Criminal Court to "war crimes in particular when committed as a part of a plan or policy or as part of a large-scale commission of such crimes."[95] To this end, there is an immediate question whether isolated incidents will even fall within the purview of the Rome Statute. A more important limitation, however, is the fact that prohibiting harm to the natural environment is only explicitly mentioned once in the entire Rome Statute.[96] In this regard, Article 8(2)(b)(iv) prohibits:

> "Intentionally launching an attack in the knowledge that such attack will cause incidental loss of life or injury to civilians or

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[94] Article 5(1)(c) vests the court with jurisdiction over "war crimes." Id. art. 5(1)(c). The definition of "war crimes" is provided by Article 8, which at one point makes reference to "widespread, long-term and severe" harm to the environment. Id. art. 8. The scope of this provision is discussed below. Articles 5(1)(d) and 5(2) also create jurisdiction over "crimes of aggression." Id. art. 5(1)(d), (2). The definition of this term, however, is not provided. In fact, the Rome Statute of the International Criminal Court ("Rome Statute") leaves it to the parties to define this term in the future. Those concerned with environmental issues may view the open-ended nature of "crimes of aggression" as a potential device to expand the International Criminal Court's jurisdiction over environmental matters.

[95] Id. art. 8(1).

[96] In other places, Article 8 prohibits as a "war crime" conduct that may be collaterally related to the well-being of the natural environment, or have some other ancillary connection. Examples include Article 8(2)(a)(iv), which sanctions "extensive destruction and appropriation of property, not justified by military necessity and carried out unlawfully and wantonly." Id. art. 8(2)(a)(iv). Article 8(2)(b) prohibits other serious violations of the laws and customs applicable in international armed conflict, within the established framework of international law, namely:

(ii) Intentionally directing attacks against civilian objects;
(iii) Intentionally directing attacks against ... installations, [or] material ... involved in a humanitarian assistance or a peacekeeping mission;
(v) Attacking or bombarding ... dwellings or buildings which are undefended and which are not military objectives;
(ix) Intentionally directing attacks against ... [inter alia] historic monuments;
(xiii) Destroying or seizing the enemy's property unless such destruction or seizure be imperatively demanded by the necessities of war;
(xvi) Pillaging a town or place; [and]
(xxv) Intentionally using starvation of civilians as a method of warfare by depriving them of objects indispensable to their survival.
Id. art. 8(2)(b).

> damage to civilian objects or widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated."[97]

Article 8(2)(b)(iv) triggers numerous interpretive concerns within the context of criminal law analysis of environmental crime at the international level. By way of overview, there are three principal components to the language of Article 8(2)(b)(iv): (1) the actual physical act, or actus reus, which consists of inflicting "widespread, long-term and severe damage" to the natural environment; (2) the mental element, or mens rea, namely that the infliction of this harm must be done intentionally and with knowledge that the attack will create "widespread, long- term and severe damage" to the natural environment; and (3) even if both the physical and mental elements are found, military advantage can operate as a defense to criminal wrongdoing. I will now briefly discuss each of them.

1. *The Physical Act: Widespread, Long-term and Severe Damage*

A successful prosecution under the Rome Statute will, first and foremost, have to show that the accused committed "widespread, long-term and severe" damage to the natural environment. Of great importance is that all three elements must conjunctively be proven. The language of "widespread, long-term and severe" is not new. It has woven its way into other international agreements relating to the use of the environment in times of war.[98] To this end, the Rome Statute may not advance environmental concerns beyond the progress made in these prior documents.[99] What exactly do "widespread," "long-term," and "severe" mean? The Rome Statute is silent on this point. Some interpretive guidance can be provided by the work of the Geneva Conference of the Committee on Disarmament (CCD) Understanding regarding the application of these terms in the ENMOD Convention.[100] This additional work was necessary because the

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[97] UNITED NATIONS CONFERENCE ON THE ESTABLISHMENT OF AN INTERNATIONAL CRIMINAL COURT, (2 April 1998), section B(b) to the "War Crimes" section of Part 2 (emphasis added) <http://www.un.org/icc/part2.htm> (on file with the Fordham International Law Journal)

[98] For example see Article I of the 1977 United Nations Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques [FN17] ("ENMOD Convention") and the 1977 Protocol I to the 1949 Geneva Convention ("Protocol I").

[99] In fact, by providing that all three elements must be conjunctively shown to exist, this language regresses from the wording of the ENMOD Convention, which bases liability disjunctively on proof of only one of these three characteristics.

[100] See Understanding I of the Conference of the Committee of Disarmament reprinted in Documents on the Law of War, (Adam Roberts & Richard Guelff eds., 2d ed. 1989)

ENMOD Convention does not itself define these terms. The CCD Understanding provides as follows:

- "widespread": encompassing an area on the scale of several hundred square kilometers;
- "long-lasting": lasting for a period of months, or approximately a season;
- "severe": involving serious or significant disruption or harm to human life, natural and economic resources or other assets.[101]

Regrettably, the interpretive value of the CCD Understanding is curtailed by the fact that it stipulates that its use is limited to the ENMOD Convention and is not intended to prejudice the interpretation of similar terms if used in another international agreement.[102] As it turns out, greater interpretive guidance may be obtained from commentaries on Protocol I, especially because the language of this protocol is, like the Rome Statue, conjunctive in nature. From an environmental perspective, the prohibitions in Protocol I are more circumscribed than those of the ENMOD Convention. For example, "long-term" has been interpreted as meaning "lasting for decades."[103]

To this end, it will be important to develop a memorandum of understanding under the Rome Statute in which the scope of "widespread," "long- term," and "severe" is delineated. In doing so, it will be important to go beyond the language of the ENMOD Convention. For starters, the "widespread" and "long-term" principles attempt to ascribe temporal and geographic limitations on environmental harm that, for the most part, does not know such boundaries. "As the planet constitutes one single ecosystem, environmental degradation of one part of the earth ultimately affects the entire planet."[104] On another note, the "severe" requirement could mean that damage to an isolated section of the global commons whose natural resources have not yet been valued by global financial markets could escape punishment and, this notwithstanding its biodiversity or species-importance. The anthropocentric limitation of "severe" damage to that which affects human life and human consumption of natural resources underscores a more general shortcoming with the existing framework of environmental protection during wartime, namely that this protection is not geared to

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[101] Id

[102] Id

[103] JOZEF GOLDBLAT, THE MITIGATION OF ENVIRONMENTAL DISRUPTION BY WAR: LEGAL APPROACHES, IN ENVIRONMENTAL HAZARDS OF WAR: RELEASING DANGEROUS FORCES IN AN INDUSTRIALIZED WORLD 48, 52 (Arthur Westing ed. 1990).

[104] See Berat, supra note 41 at 348 n.102.

protecting the environment per se, but, rather, humanity's need to make use of it.[105]

In the end, it may be preferable to reduce the physical requirement for imposing criminal responsibility not to "widespread, long-term and severe" harm, but instead to "harm" more generally. The amplitude of the harm would instead inform sentencing principles, as opposed to culpability. A paradigm shift would focus on the environment as the victim of the harm as opposed to humanity. Given that conjunctive language has woven its way into the Rome Statute, it will be necessary for environmental public interest groups to involve themselves in any litigation in order for the International Criminal Court to arrive at an informed and environmentally sensitive decision. This involvement would represent quite a turn-around given to the limited presence of environmental public interest groups at the Rome Statute negotiations. The question, by now academic, that is left hanging, is whether a greater presence of such groups at the negotiations could have resulted in the integration of stronger provisions safeguarding the environment.

2. *The Mental Element: Strict Intentionality*

Criminal behavior is evaluated not only on the actual physical act, but also on the mind-set of the criminal when the act was committed.[106] In the case of Article 8(2)(b)(iv), criminal sanction will only fall upon the most invidious offender: the individual who knows his or her behavior will cause "widespread, long-term and severe" damage to the environment and, notwithstanding proof of this knowledge, still commits the act with the full

[105] For example, Article 8(2)(b)(xxv) of the Rome Statute, prohibits as a method of warfare the intentional use of starvation of civilians through the deprivation of objects indispensable to their survival. Rome Statute, supra note 6, art. 8(2)(b)(xxv). Although tactics such as "scorched earth" and "defoliation" have been used to starve civilians and thereby to dissuade their helping insurgency movements, the Rome Statute does not criminalize the destruction of the earth but, rather, the denial of a type of the earth's resources to civilian populations. In other words, the destruction of land that does not provide food would not be cognizable within the Rome Statute unless the conditions of Article 8(2)(b)(iv) were met. Id. art. 8(2)(b)(iv). As shall be discussed below, there may even be a requirement that, in order for environmental harm to be "severe" (and hence for Article 8(2)(b)(iv) to apply), it must simultaneously affect humanity.

[106] In some cases, for example driving while intoxicated, governments have made a policy decision to mete out criminal sanctions simply through the physical element: if one is intoxicated, for example eighty milligrams of alcohol in 100 milliliters of blood, criminal liability attaches. It does not matter whether or not the accused knew that he or she was above the limit, or intended to be above the limit. In other situations, a similar physical act, for example homicide, will be treated differently depending on the mind-set of the accused and the circumstances surrounding the crime. Planning the death of an individual will trigger significantly more severe consequences than accidentally or negligently causing someone's death.

intention of causing the environmental damage. Proof that someone did not know that the act would commit "widespread, long-term and severe" damage would, under the present wording, be sufficient to absolve that individual from criminal sanction. To this end, the language of Article 8(2)(b)(iv) is very narrow. There is no liability for negligently or carelessly inflicting "widespread, long-term and severe" damage to the environment which means that persons who are found to act negligently will not face any criminal or civil sanction at all.

Greater detail as to the intentions of the negotiating parties emerges from footnotes in the Draft Rome Statute.[107] These footnotes reinforce the conclusion that a significant mental element is required to ground culpability. The negotiators "accept that it will be necessary to insert a provision . . . which sets out the elements of knowledge and intent which must be found to have existed for an accused to be convicted of a war crime."[108] An accused's actions are to be evaluated in light of the "relevant circumstances of, and information available to, the accused at the time."[109] Given this defense, it will be important to educate military and political officials in both developing and developed nations as to the environmentally harmful effects of certain types of warfare and to disseminate the technologies to avoid reliance on such strategies in the first place. Unless some level of objective knowledge is read into the intentionality requirement, individuals who choose not to inform themselves that what they are doing might be deleterious for the environment might be able to claim ignorance as a full defense. A failure to incorporate an objective element into the Rome Statute's environmental war crimes also represents a step backwards insofar as Protocol I had, as early as 1977, grounded responsibility not in intentional environmental harm, but simply, when there was a reasonable expectation that environmental damage would occur.[110]

3. *Defense: Avoiding Criminal Sanction Through Proof of Military Advantage*

Even if there is "intentional, widespread long-term," and severe damage to the natural environment, liability is only found if this damage is "clearly excessive" in relation to the concrete and direct overall military advantage anticipated. This limitation on culpability is a somewhat diluted version of the doctrine of "military necessity," a long-standing customary principle of

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[107] See United Nations Conference on the Establishment of an International Criminal Court, supra note 68.

[108] Id.

[109] Id.

[110] See First Int'l Conf. on Addressing Envtl. Consequences of War: Legal, Econ. and Sci. Perspectives, Addressing Environmental Consequences of War, Background Paper, 17 (June 10-12, 1998)

the Law of War that has, in the past, been used to mitigate or to eliminate responsibility often for grievous breaches of humanitarian standards.[111]

"Military necessity" is a slippery-slope that has justified a broad array of environmentally destructive conduct. By way of example, the 1907 Hague Convention's environmental protection provisions have been largely eroded by the doctrine of military necessity.[112]

Although one step removed from a blanket exemption for "military necessity," Article 8(2)(b)(iv)'s use of "military advantage" shares many of these same drawbacks. More pointedly, however, there are also concerns as to the effectiveness of the specific language arrived at by the negotiating parties in Article 8(2)(b)(iv). Firstly, although a "proportionality test"--i.e., the environmental damage must be "clearly excessive" in relation to the military advantage--is established, no guidelines, definitions, or examples of "clearly" or "excessive" are provided. To this end, initial decisions by the International Criminal Court will be important in setting the scope for "clearly excessive." From this judicial discretion there emerges a risk that a very high threshold will be required. The factual element of the "proportionality test" is also unclear: because proof of "clearly excessive" is required in order to find someone guilty, and because the onus of proof rests with the prosecutor, what type of research and data will have to be marshaled? Secondly, other adjectival terms such as "concrete," "direct," and "overall" military advantage are vague and, for the most part, fairly novel in the international legal context. Once again, it is unclear what meaning will be ascribed to these qualifying terms. Thirdly, the military advantage needs simply to be "anticipated." It is unclear by whom and according to what standards the "anticipation" is to be judged. Does there

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[111] In short, "military necessity" is: [a] subjective doctrine which 'authorizes' military action when such action is necessary for the overall resolution of a conflict, particularly when the continued existence of the acting state would otherwise be in jeopardy.[111] When the existence . . . of a state stands in unavoidable conflict with such state's treaty obligations, the latter must give way, for the self-preservation and development . . . of the nation are the primary duties of every state. See Mark J.T. Caggiano, *The Legitimacy of Environmental Destruction in Modern Warfare: Customary Substance over Conventional Form*, 20 B.C. ENVTL. AFF. L. REV. 479, 496 (1993).

[112] See Ensign Florencio J. Yuzon, *Deliberate Environmental Modification Through the Use of Chemical and Biological Weapons: "Greening" the International Laws of Armed Conflict to Establish an Environmentally Protective Regime*, 11 AM. U. J. INT'L L. & POL'Y 793, 815 (1996). Florencio Yuzon relates the following example: [I]n the Second World War, the German General Lothar Rendulic adopted a scorched earth policy in Norway in order to evade advancing Russian troops. General Rendulic ordered the evacuation of all inhabitants in the province of Finmark, and destroyed all villages and surrounding facilities. The Nuremberg Military Tribunal charged general Rendulic with wanton destruction of property, but later acquitted him on the basis that military necessity justified his actions in light of the military situation as he perceived it at the time.

have to be an objective element to the anticipation, or can the belief be unrealistic? As with the intentionality requirement, if the notion of military advantage remains subjective in the mind of the military or political leader under the circumstances in which the tactical decision was made, then the defense could be widely available. In order to curtail misuse of the defense, it will be important to establish some objective standards as to when the environment may be destroyed in order to salvage national sovereignty.

B. Possibility of Criminal Liability for Environmental Damage under Article 8(2)(b)(iv): A Critical Review

More profoundly, the time may have come to question whether humanity's recourse to physical aggression to settle national or local disputes ought ever to trump environmental integrity. Such an examination would involve a reinterpretation of the interaction between international environmental law and the law of war. Certain practices, such as genocide and torture, have been sanctioned as illegal by the international community to the extent that they can never be undertaken even if essential to defend national sovereignty. Why should intentional environmental desecration not be similarly proscribed?

The international community's decision to criminalize the wilful infliction of "widespread, long-term, and severe damage to the natural environment" is a cause for limited celebration, considerable disappointment, and some concern. The disappointment flows from the fact that such conduct is already "prohibited" by virtue of Protocol I and the ENMOD Convention. Nonetheless, the Rome Statute may well provide a more viable mechanism to sanction this illegal conduct. It is an important step for the international community to actually criminalize this conduct, which it has never done before. Nonetheless, as we have seen, it is unclear how difficult it will be to prove "widespread, long-term and severe" damage; proof will be rendered more problematic by the fact that the provision appears conjunctive.

In the end, these potential difficulties may denude the prohibition of much practical effect. Additionally, the environmental war crime could possibly be interpreted as requiring a very significant level of knowledge, intentionality, and harm. If direct knowledge is required, then behavior could no longer be sanctioned on an objective basis, and ignorance of the law could serve as a defense. This type of knowledge requirement would be less than desirable as environmental education and transparency of knowledge would be discouraged. Requiring direct knowledge of the environmental war crime may also create some tension with Article 28's evaluation of command responsibility along objective standards. If intention is required, then how could a commander be liable for the activities of subordinates not known to the commander at the time? The wording of Article 8(2)(b)(iv) appears to preclude a commander's liability for

environmental desecration that the commander "ought to have known" about, but did not, even if this ignorance is due to wanton disregard.

On another note, the environmental war crimes provisions of the Rome Statute do not apply to internecine, as opposed to inter-state conflicts.[113] This limitation is major. Events in Rwanda and former Yugoslavia underscore that the environment will suffer even in the event of a civil, as opposed to national war.[114] The development of international law applicable to internal conflicts should be a top priority for policy-makers given the current dearth of standards in this area.[115] The incipient development of a tribunal to investigate war crimes in Cambodia's internecine violence could present a renewed opportunity to develop and to implement environmental crimes to an internal conflict.

On the other hand, one of the major successes of the Draft Statute is that it creates an institution to punish the conduct that it prohibits. Nonetheless, from the environmental point of view, the extent to which these "environmental crimes" will receive the International Criminal Court's attention is uncertain given the broad array of other crimes to which it will have to direct its energies. The environmental "war crimes" constitutes one

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[113] See Rome Statute, supra note 8, 96. See art. 8(2)(c), (e) (listing types of war crimes punishable within internal armed conflicts). Intentionally inflicting widespread, long-term, and severe harm to the environment is omitted from this list. It was explicitly included within the international armed conflict section in Article 8(2)(b). Id. art. 8(2)(b). Basic principles of treaty interpretation provide that this omission is deliberate and indicates a desire not to punish environmental desecration when committed in an internal conflict. Needless to say, further limitations on the application of the entire Rome Statute to internal conflicts are found in Article 8(2)(f), which provides:

Paragraph 2(e) applies to armed conflicts not of an international character and thus does not apply to situations of internal disturbances and tensions, such as riots, isolated and sporadic acts of violence or other acts of a similar nature. It applies to armed conflicts that take place in the territory of a State when there is protracted armed conflict between governmental authorities and organized armed groups or between such groups. Id. art. 8(2)(f) (emphasis added).

In sum, nations appear less willing to support objective standards of criminal behavior in internal conflicts than in international conflicts. In the end, this reluctance gives rise to concerns that the protection of both humanity and the environment in internal conflicts may be inadequate.

[114] Other examples of effect of civil war on the environment include El Salvador and Columbia. Insurgency and counter-insurgency guerilla civil wars have a particularly devastating effect on local environments. Insurgents often use tropical forests as home bases and hiding grounds; counter-insurgency forces often respond by slashing and burning forests, together with polluting rivers, viewing both as legitimate theaters of operations.

[115] See First Int'l Conf. on Addressing Envtl. Consequences of War: Legal, Econ. and Sci. Perspectives, Addressing Environmental Consequences of War, Background Paper, 17 (June 10-12, 1998)

provision out of dozens in Part 2 of the Rome Statute. Environmental crimes are not raised as independent crimes; at most, they constitute an add-on in narrowly circumscribed areas. This provision limits the possibility for future growth and application within, and outside of, the context of military conflict.[116]

V. CONCLUSION

The international crime of ecocide as defined in this article, is not yet recognized. However, categories of environmental destruction, which fit within the definition of ecocide, are gaining recognition. One such example is the inclusion of environmental damage as a war crime in the Rome Statute.

Criminalization of ecocide will likely occur not only because of hardened attitudes and moral outrage, but also because it may ultimately become necessary to prevent widespread environmental destruction. Such criminalization is analogous to declarations of the illegality of nuclear weapons during the Cold War, not merely on moral grounds, but because they threaten civilization.[117] Similarly, the international community in the interest of its own survival must eventually outlaw ecocide.

This article, through its theoretical examination of the normative aspects of criminal law and their applicability to ecocide, attempted to raise, as well as answer questions basic to the concept and scope of international environmental crime. The tremendous complexity of this subject deserves dialogue and exploration beyond the scope of this article. The ultimate result of such discourse will hopefully extend the concept of ecocide beyond actual war-time environmental degradation. Its extension could involve the expansion of environmental rights and the establishment of an international criminal court to prosecute peacetime infractions. The threat of harm and possibility of deterrence make the regime of international criminal law a promising forum upon which to address these issues so crucial to our survival.

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[116] See the opening language to Article 5 of the Rome Statute, where the jurisdiction of the International Criminal Court is set out. Rome Statute, supra note 6, art. 5. The International Criminal Court is not given any jurisdiction to address environmental crimes standing alone.

[117] See C.G.WEERAMANTRY, NUCLEAR WEAPONS AND SCIENTIFIC RESPONSIBILITY (1987) at p.79.