

# Ecocide and the Carbon Crimes of the Powerful

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## Abstract

*The missing link in discussions and debates about climate change are the carbon criminals. These are governments (the key focus for climate action) and transnational corporations (the key drivers of global warming). While state-corporate collusion in support of activities that add to and rationalise carbon emissions is widely acknowledged, rarely are such activities and denials of harm subject to the discourses of criminalisation. Recent efforts to name these as transgressions and injustices have done so under the rubric of ecocide. Despite foreknowledge of the immense harms it will cause, global warming continues apace. This article explores the dynamics of climate change criminality through discussion of the perpetrators of climate-related harm, issues of responsibility and responses to the causes of climate injustice.*

## Keywords

*Climate Change; Climate Justice; Ecocide; State-Corporate Crime*

## I INTRODUCTION

Climate change criminality is a key focus of this article. Global warming is rapidly transforming the biophysical world in ways that have massive ramifications for humans, specific eco-systems, and animal and plant species. Consequential changes are already evident in disruptions stemming from record heat waves, altered precipitation patterns, sea level rise and other climate outcomes.<sup>1</sup> Harms associated with climate change are significant criminologically, not least because global warming itself is caused primarily by human actions.

Green criminology refers to a growing body of criminological research and scholarship, comprised of a number of distinct theoretical approaches, which focuses on the nature and dynamics of environmental crimes and harms (that may incorporate wider definitions of crime than provided in strictly legal definitions), environmental laws (including enforcement, prosecution and sentencing practices) and environmental regulation (systems of administrative, civil and criminal law that are designed to manage, protect and preserve specified environments and

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<sup>1</sup> See, eg, US Global Change Research Program, *Fourth National Climate Assessment* (Report No 4, 2018).

species, and to manage the negative consequences of particular industrial processes).<sup>2</sup>

A fundamental premise of green criminology is that environmental crime needs to be defined and studied in relation to harm, and not solely on the basis of legal definitions. There are two reasons for this. First, much existing environmental harm is legal. Harm to the environment is, in many situations, considered to be acceptable because it is an inherent consequence of industrial activities that are seen to provide significant economic benefits (for instance, in certain circumstances, pollution is allowed under license or authorisation, and is simply treated as an externalised cost of doing business).<sup>3</sup> This can be problematic for green criminologists, who argue that ecological criteria warrant significant weight in deciding the normative status of environmentally harmful acts or omissions as ‘good’ or ‘bad’, and that laws do not always get the calculus right.<sup>4</sup> For green criminology, environmental harms, regardless of legality, need to be closely scrutinised and the activities that cause serious harm may be considered ‘criminal’ – from a criminological harm perspective – depending upon situation and specific analysis.

Second, reliance upon strictly legal definitions of crime sidesteps fundamental matters of social power and sectional interests, and the manner in which these are reflected in legal definitions. Accordingly, a more expansive definition of environmental crime within green criminology includes environment-related harms facilitated *by the state*, as well as *corporations and other powerful actors*, insofar as these institutions have the capacity to shape official definitions of environmental crime in ways that allow or condone environmentally harmful practices.<sup>5</sup> Thus, issues pertaining to state crime (the state as perpetrator of environmental harm) and transnational corporate crime (including the legitimacy granted to ecologically destructive acts and omissions on the part of large firms) demand attention in their own right.

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<sup>2</sup> See Piers Beirne and Nigel South (eds), *Issues in Green Criminology: Confronting Harms Against Environments, Humanity and Other Animals* (Willan Publishing, 2007); Matthew Hall, *Exploring Green Crime: Introducing the Legal, Social and Criminological Contexts of Environmental Harm* (Palgrave, 2015); Michael Lynch et al, *Green Criminology: Crime, Justice and the Environment* (University of California Press, 2017); Angus Nurse, *An Introduction to Green Criminology and Environmental Justice* (Sage, 2016); Nigel South and Avi Brisman, (eds), *The Routledge Handbook of Green Criminology* (Routledge, 2013); Rob White and Dianne Heckenberg, *Green Criminology: An Introduction to the Study of Environmental Harm* (Routledge, 2014).

<sup>3</sup> White and Heckenberg, above n 2; see also Stuart Bell and Donald McGillivray, *Environmental Law* (Oxford University Press, 7<sup>th</sup> ed, 2008); Gerry Bates, *Environmental Law in Australia* (LexisNexis Butterworths, 9<sup>th</sup> ed, 2016).

<sup>4</sup> Samantha Bricknell, Australian Institute of Criminology, *Environmental Crime in Australia* (Report, 2010).

<sup>5</sup> Rob White, *Transnational Environmental Crime: Toward an Eco-Global Criminology* (Routledge, 2011).

Harm has been described as a ‘normative concept that reflects underlying social judgments about the good and the bad’, and environmental harm specifically has been defined as ‘a setback to human interests that community norms have deemed to be significant’.<sup>6</sup> The ‘wrongdoing’ studied within green criminology is initially informed by legal conceptions and constructions of harm.<sup>7</sup> The nature and seriousness of harm – what makes something ‘criminal’ or not – is captured in the distinction between illegality (*malum prohibitum*) and serious harm (*malum in se*).<sup>8</sup> Environmental crime is typically defined on a continuum ranging from strict legal definitions through to broader harm perspectives.<sup>9</sup> The matter of legality does not prevent criminologists from critiquing certain types of ecologically harmful activities that happen to be legal, such as the clearfelling of forests or, as is pertinent to this article, continuing high levels of human-caused carbon emissions. Therefore, green criminology ‘provides an umbrella under which to theorise and critique both *illegal* environmental harms (that is, environmental harms currently defined as unlawful and therefore punishable) and *legal* environmental harms (that is, environmental harms currently condoned as lawful but which are nevertheless socially and ecologically harmful)’.<sup>10</sup>

Green criminology is oriented towards *exposing* activities that cause significant damage to the environment. It is *aspirational* in the sense of arguing for the formal criminalisation of behaviour that is particularly destructive of ecology and species. Both endeavours involve attempts to shift community thinking away from active or tacit acceptance of acts (and omissions) that are environmentally harmful, to seeing these as morally wrong, as illegal and/or as criminal.

This continuum of social judgement – from acceptance to criminalisation – forms the crux of the present article. At the centre of the proposed normative shift is a crime that exposes environmental harm while posing significant challenge to the interests of the powerful: ecocide.<sup>11</sup> The main

<sup>6</sup> Albert Lin, ‘The Unifying Role of Harm in Environmental Law’ (2006) 3 *Wisconsin Law Review* 898, 901.

<sup>7</sup> Yingyi Situ and David Emmons, *Environmental Crime: The Criminal Justice System’s Role in Protecting the Environment* (Sage, 2000).

<sup>8</sup> Illegality (*malum prohibitum*) refers to conduct that is prohibited by law but generally considered less serious than other types of social harms (homicide, for example). For instance, cutting down trees and pulling species out of the ocean are not intrinsically criminal or ‘bad’ activities from the point of view of the law. It is the context that makes something allowable or problematic. Serious harm (*malum in se*) refers to conduct inherently wrong by nature, and considered serious. The main issue here is to ban specific substances and/or activities. The intent of the law is the prevention and abolition of harmful practices. See White and Heckenberg, above n 2.

<sup>9</sup> Bricknell, above n 4.

<sup>10</sup> White and Heckenberg, above n 2, 13.

<sup>11</sup> As discussed below, ecocide refers to preventable, human-caused damage to, and destruction of, the environment.

targets for action to prevent ecocide are nation-states and transnational corporations. Importantly, responding to the actions of those who carbon pollute involves both discursive critique (that is, attempts to criminalise such activities in popular and academic discourse) and attempts to introduce legal reform such as a new criminal offence (as part of international criminal law). Dealing with the key perpetrators of global warming requires diverse and multiple social and legal interventions.<sup>12</sup> This, too, is an underlying theme of the article.

The article is comprised of three main sections. The first section affirms the reality of climate change, identifies the political problem of the lack of needed action on climate change, and the framing of this reluctance to act as ‘criminal’ by scientists and journalists. The next section discusses the concept of ecocide, particularly from a criminological perspective, and its relevance to issues of climate justice. Ecocide refers to environmental destruction on a substantial scale. Analysis of ecocide in relation to global warming demands that attention be placed on the key perpetrators of the harm. The third section explores the systemic reasons for climate change ecocide and particularly the sectoral interests of business and government. It addresses the question of responsibility for global warming, and thus ecocide on a planetary scale. The article concludes with discussion of the criminalisation process and its relevance to debates over climate change.

## II NAMING THE PROBLEM: CLIMATE CHANGE AND CRIME

This section is about knowledge and science, activities that contribute to carbon emissions, and the naming of wilful ignorance about climate change as a crime. It sets the scene for later discussions of ecocide and crimes of the powerful.

Climate change is occurring, due to global warming. This is scientific fact, not a ‘belief’.<sup>13</sup> Global warming is happening primarily due to anthropogenic (human) causes. This is scientific fact, not a ‘belief’.<sup>14</sup> The social, environmental and economic impacts of climate change are

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<sup>12</sup> Rob White and Ron Kramer, ‘Critical Criminology and the Struggle Against Climate Change Ecocide’ (2015) 23(2) *Critical Criminology* 383.

<sup>13</sup> Intergovernmental Panel on Climate Change, *Climate Change 2013: The Physical Science Basis: Summary for Policymakers* (Report, 27 September 2013); Intergovernmental Panel on Climate Change, *Climate Change 2014 Synthesis Report: Approved Summary for Policymakers* (Report, 1 November 2014).

<sup>14</sup> Intergovernmental Panel on Climate Change, *Climate Change 2013*, above n 13. Indeed, this fact has been formally acknowledged by mainstream commentators and economists for well over a decade. Witness, for example, the Stern Report’s key take-home message: ‘[a]n overwhelming body of scientific evidence indicates that the Earth’s climate is rapidly changing, predominantly as a result of increases in greenhouse gases caused by human activities’. Nicolas Stern, *Stern Review: The Economics of Climate Change* (Report, 2006) 3.

multiple, planet-wide and in some instances catastrophic for human populations, flora, fauna and ecosystems.<sup>15</sup> The problem is acute and not going to go away, no matter how vociferous the denial or obtrusive the contrarianism.<sup>16</sup>

From around the 1990s onwards, knowledge about climate change, the contribution of carbon emissions to climate change, and the consequences of climate change has been widely available and generalised; the problems are known and have featured centrally in global political forums.<sup>17</sup> Contemporary science confirms that carbon emission (alongside that of other greenhouse gases), and (to a lesser extent) deforestation are the main causes of global warming.<sup>18</sup>

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<sup>15</sup> See, for example N Watts et al, 'The Lancet Countdown: Tracking Progress on Health and Climate Change' (2017) 389 *Lancet* 1151; Sutherland et al, 'A 2018 Horizon Scan of Emerging Issues for Global Conservation and Biological Diversity' (2018) 33(1) *Trends in Ecology and Evolution* 47; Stern, above n 14.

<sup>16</sup> Denial and scepticism have long featured in debates over the status and causes of climate change. Over time, however, denial has taken on the attributes of contrarianism. As Avi Brisman notes, 'while scepticism can be both a healthy part of the scientific process and an excuse to present political or value-laden perspectives (that are masked behind a scientific façade), contrarianism suggests an ideological, rather than scientific, impetus for disagreement'. Avi Brisman, 'The Cultural Silence of Climate Change Contrarianism' in R White (ed), *Climate Change From a Criminological Perspective* (Springer, 2012) 41, 43. State-corporate collusion in fostering contrarianism has been well documented, particularly in the United States. See Avi Brisman, 'The Violence of Silence: Some Reflections on Access to Information, Public Participation in Decision-Making, and Access to Justice in Matters Concerning the Environment' (2013) 59(3) *Crime, Law and Social Change* 291; Ron Kramer, 'Carbon in the Atmosphere and Power in America: Climate Change as State-Corporate Crime' (2013) 36(2) *Journal of Crime and Justice* 153; Michael Lynch, Ronald Burns and Paul Stretesky, 'Global Warming and State-Corporate Crime: the Politicalisation of Global Warming Under the Bush Administration' (2010) 54(2) *Crime, Law and Social Change* 213. See also Naomi Oreskes and Erik Conway, *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming* (Bloomsbury, 2010).

<sup>17</sup> Edward Page, 'Distributing the Burdens of Climate Change' (2008) 17(4) *Environmental Politics* 556. For example, the 1992 United Nations Conference on Environment and Development (UNCED) (the 'Earth Summit' or 'Rio Conference') explicitly acknowledged the environmental rights of humans and presented a call to action on global environmental matters. It was at this conference that the United Nations Framework Convention on Climate Change was adopted as an international environmental treaty and opened for signature. It entered force in 1994 after a sufficient number of countries had ratified it. The Convention's objective is to 'stabilise greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system'. Problem and perpetrator were and are clearly identified. United Nations Framework Convention on Climate Change, opened for signature 3 June 1992, 1771 UNTS 107 (entered into force 21 March 1994) art 2.

<sup>18</sup> Intergovernmental Panel on Climate Change, *Climate Change 2014 Synthesis Report*, above n 13; Australian Panel of Experts on Environmental Law, *Climate Law* (Technical Paper 5, April 2017); Edmund McGarrell and Carole Gibbs, *Conservation Criminology, Environmental Crime, and Risk: An Application to Climate Change* (Oxford Handbooks Online, 2014).

Yet, even after several decades of generalised foreknowledge and heightened forewarning, global warming continues apace. In fact, the situation has worsened since the official recognition of global warming, as reported in a succession of IPCC reports.<sup>19</sup> A key question, therefore, is, given knowledge of the problem and its consequences, why have things become worse rather than better?

The answer is not technical. Indeed, even if there were substantially lower emissions at present, the heating up of the planet would still continue for decades owing to the time lag between global warming cause and effect. Rather, the problem is political – key carbon emission perpetrators continue to pollute with relative impunity, supported by and in some instances including nation-states.

The missing link in discussions and debates about climate change are the ‘carbon criminals’.<sup>20</sup> These include a wide range of actors, from farmers and tourism operators through to national transportation firms and individual consumers. The largest contributors to global warming are governments (the key focus for climate action, in terms of policy debate) and transnational corporations (the key drivers of global warming). While state-corporate collusion in support of activities that add to and rationalise carbon emissions is widely acknowledged, rarely are such activities and denials of harm subject to the discourses of criminalisation. For criminologists, in particular, this is an important lacuna that is finally starting to be addressed more directly.<sup>21</sup>

The term ‘criminals’ is nonetheless familiar to campaigners actively speaking out on climate change issues. Consider, for example, the words of a leading scientist. Environmental scientist and climate activist David Suzuki in an interview with Bill Moyers stated that:

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<sup>19</sup> See eg Intergovernmental Panel on Climate Change, *Climate Change 2013*, above n 13; Intergovernmental Panel on Climate Change, *Climate Change 2014 Synthesis Report*, above n 13. It has been noted that ‘[i]n the 25 years since nations resolved to act in 1992, the level of atmospheric carbon dioxide has continued to climb ever more rapidly. It is now well clear of 400 parts per million everywhere in the world – 45 per cent higher than in pre-industrial times’. Peter Boyer, ‘El Niño Weather Event puts Gloss on Another Stinker of a Year’, *Mercury* (Tasmania, 16 January 2018) 14.

<sup>20</sup> Rob White, ‘Carbon Criminals, Climate Change and Ecocide’ in Cameron Holley and Clifford Shearing (eds), *Criminology and the Anthropocene* (Routledge, 2017) 50.

<sup>21</sup> See Ron Kramer, ‘Public Criminology and the Responsibility to Speak in the Prophetic Voice Concerning Global Warming’ in Elizabeth Stanley and Jude McCulloch (eds), *State Crime and Resistance* (Routledge, 2013) 1, 41; Rob White, *Climate Change Criminology* (Bristol University Press, 2018).

‘Our politicians should be thrown in the slammer for willful blindness. ...I think that we are being willfully blind to the consequences for our children and grandchildren. It’s an *intergenerational crime*.’<sup>22</sup>

Journalists have resorted to similar choices of words. Tom Engelhardt, editor of *TomDispatch.com*, has commented that:

‘[Big Oil’s] top executives continue to plan their futures (and so ours), knowing that their extremely profitable acts are destroying the very habitat, the very temperature range that for so long made life comfortable for humanity. Their prior knowledge of the damage they are doing is what should make this a *criminal activity*. ... If the oil execs aren’t terrorists [sic], then who is? And if that doesn’t make the energy companies *criminal enterprises*, then how would you define that term? To destroy our planet with malice aforethought, with only the most immediate profits on the brain, with only your own comfort and wellbeing (and those of your shareholders) in mind: Isn’t that the *ultimate crime*? Isn’t that terricide?’<sup>23</sup>

These powerful statements by forthright scientist and journalist pinpoint vital issues and highlight the gravity of the wrongdoing. For their part, legal commentators and criminologists have been rather more reluctant to employ this rhetoric, perhaps in part due to the ways in which ‘crime’ and ‘criminal’ are substantively defined in legal and disciplinary terms. Nonetheless, recent efforts to name these as transgressions and injustices have done so under the rubric of *ecocide*.

### III THE CRIME OF ECOCIDE

The term ‘ecocide’ emerged in the late 1960s in response to the impact of war on the environment, and has since been used in reference to the negative impacts on environments under peacetime as well as wartime conditions.<sup>24</sup> With regard the latter, the concept has been used to refer to the extensive damage to, or destruction or loss of, ecosystems of a given

<sup>22</sup> B Baker, *Dr David Suzuki Tells Bill Moyers Why it’s Time to Get Real on Climate Change* (11 November 2014) EcoWatch <<http://ecowatch.com/2014/05/11/david-suzuki-bill-moyers-climate-change/>>. Emphasis added.

<sup>23</sup> Tom Engelhardt, *Terricide and the Terrorists: Destroying the Planet for Record Profits* (21 May 2013) TomDispatch.com <<http://www.tomdispatch.com/blog/175703/>>. Emphasis added.

<sup>24</sup> Steven Freeland, ‘Addressing the Intentional Destruction of the Environment During Warfare under the Rome Statute of the International Criminal Court’, (PhD Thesis, Maastricht University, 2015); Mark Gray ‘The International Crime of Ecocide’ (1996) 26 *California Western International Law Journal* 215; David Zierler, *The Invention of Ecocide: Agent Orange, Vietnam, and the Scientists who Changed the Way We Think About the Environment* (University of Georgia Press, 2012). Ecocide, described as the causing of widespread long-term and severe damage to the natural environment, was originally included in the draft *Rome Statute of the International Criminal Court* but was later removed under circumstances that are less than clear. See Polly Higgins, Damien Short and Nigel South, ‘Protecting the Planet: A Proposal for a Law of Ecocide’ (2013) 59(3) *Crime Law and Social Change* 251.

territory, and includes both natural (for example, pest infestation of an ecosystem) and anthropogenic (that is, as a result of human activity) causes for the harm.<sup>25</sup> Recently the concept has also been applied to the global scale insofar as the consequences of climate change are planet-wide, transformative and catastrophic.<sup>26</sup> From a legal and criminological perspective, if such harms occur as a result of human agency (individuals, corporations and/or nation-states) it is argued by some that these acts or omissions should be defined, at the very least, as a crime against the peace in international law.<sup>27</sup> This does not necessarily entail a requirement that every individual person contributing to climate change be considered to be engaged in a criminal act (or that the law should be amended to criminalise such behaviour). Rather, the argument is that those who wield significant power (either governments or corporations) are particularly responsible, as they are better placed to make a difference if they change their behaviour. Responsibility is or should be proportionate to contribution to harm.<sup>28</sup>

### *A Diverse Conceptualisations of Ecocide*

The term ecocide is used to conceptualise a harm-defining process, but the causes and content of the harms vary depending upon how the concept is defined and applied; it does not always refer to a crime. For example, ecocide as an *ecological* concept can be used to describe natural processes of ecosystem decline and transformation.<sup>29</sup> This include instances where, for example, kangaroos consume the grasses and shrubs contained in a paddock to the extent that both the specific environment and its inhabitants are negatively affected. There is no grass left, and as a result the kangaroo mob may starve, due to lack of resources, or be forced to migrate. The landscape is denuded to such an extent that the existing ecological integrity is compromised.

The term ecocide has also been applied, in a *specific legal sense*, to extensive environmental damage during war, as in the case of the use of defoliants (such as Agent Orange) in the Vietnam War, and the blowing up of oil wells and subsequent pollution during the first Gulf War in Iraq and Kuwait.<sup>30</sup> These actions involved intent to actually produce environmental destruction in pursuit of military and other goals. While such actions have been formally criminalised (via international criminal

<sup>25</sup> Polly Higgins, *Eradicating Ecocide: Laws and Governance to Prevent the Destruction of our Planet* (Shepherd-Walwyn Publishers Ltd, 2010); Polly Higgins, *Earth is our Business: Changing the Rules of the Game* (Shepherd-Walwyn Publishers Ltd., 2012).

<sup>26</sup> White, 2018, above n 21.

<sup>27</sup> Higgins et al, above n 24.

<sup>28</sup> See Geraldine MacKenzie, Nigel Stobbs and Jodie O'Leary, *Principles of Sentencing* (Federation Press, 2010); Mirko Bagaric and Richard Edney, *Sentencing in Australia* (Lawbook Company, 2014).

<sup>29</sup> Higgins, *Eradicating Ecocide*, above n 25; Higgins, *Earth is our Business*, above n 25.

<sup>30</sup> Freeland, above n 24.

law) prosecution and conviction for them has been difficult to achieve in practice.<sup>31</sup>

As a broad generalisation, ecocide is defined first and foremost by the destruction, degradation and demolition of ecosystems and specific environments, with harmful consequences for the living creatures to which they are home. When this occurs due to particular types of human activity, ecocide also becomes terminology that describes a particular form of *criminality*. As noted, for example, specific acts of environmental destruction, within particular wartime contexts, are presently officially considered international crimes. For some, however, this particular legal definition is too restrictive, and, especially given present environmental trends including global warming, does not address those activities that may have even greater impact than those associated with military action.<sup>32</sup>

### *B Anthropocentric and Ecocentric Conceptions of Ecocide*

Ecocide as a (potential and broad) criminal offence can be conceptualised in several ways. One can distinguish between a perspective that privileges humans and human wellbeing in its definitions of harm (an anthropocentric viewpoint), and a perspective that includes the non-human in its conceptualisations (an ecocentric viewpoint).

In the first instance, doing wrong and harming others is anthropocentrically framed and its basic considerations stem from and reflect a human rights paradigm.<sup>33</sup> Ecocide in this sense complements the existing approach of the Rome Statute that deals with genocide, crimes against humanity, and war crimes (including destruction of environments during war).<sup>34</sup> The intent of proponents of this particular conception of ecocide is to extend its reach to include peacetime destruction of environments. Protection of human rights is paramount, and extends to protections pertaining to one's living environment. Thus, the demise of environmental amenity and security is considered a derogation of this

<sup>31</sup> Ibid.

<sup>32</sup> Higgins Short and South, above n 24; White, above n 21. See also Martin Crook and Damien Short, 'Marx, Lemkin and the Genocide-Ecocide Nexus' (2014) 18 *International Journal of Human Rights* 298. Human rights is not the only anthropocentric framing; others include welfare and justice framings.

<sup>33</sup> Gwynn MacCarrick as amicus curiae, 'Prayers to the Tribunal – Terms of Reference 6' *International Monsanto Tribunal* (2016).

<sup>34</sup> *Rome Statute of the International Criminal Court*, opened for signature 17 July 1998, 2187 UNTS 3 (entered into force 1 July 2002) art (2)(b)(iv). This article describes the criminal act of '[i]ntentionally launching an attack in the knowledge that such attack will cause incidental loss of life or injury to civilians or damage to civilian objects or widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated'.

duty to protect and enhance human rights, including the right to ecosystem services upon which human populations rely.<sup>35</sup>

Another conception of the crime, however, sees ecocide as premised on and linked to the idea of Earth stewardship. Ecocide in this instance is closely aligned with the concept of ecocentrism that views the environment as having value for its own sake, apart from any instrumental or utilitarian value to humans.<sup>36</sup> Ecocentrism views non-human animals, plants and rivers as rights holders and/or as objects warranting a duty of care on the part of humans.<sup>37</sup> Ecocide, in this view, is a crime not only against humans but against non-human environmental entities. Accordingly, since it does not only affect humans, ideally a case should be able to be brought to court on behalf of non-human entities if they are affected by ecocide-related acts and omissions.<sup>38</sup>

In its criminological formulation, discussions of ecocide that are informed by ecocentrism describe an attempt to criminalise human activities that destroy and diminish the wellbeing and health of ecosystems and the species within them (including humans), for which there are varying degrees of responsibility.<sup>39</sup> Climate change and the gross exploitation of natural resources are leading to our general demise, increasing the need for just such a crime.<sup>40</sup> Eventually everyone on the planet will be affected by processes that undermine existing ecosystems and habitats. This is the essence of ecocide.

From a criminological harm perspective, it is important to name such harms as crimes regardless of their present legal status. Certain acts (and omissions) are defined in the legal system as being criminal while others are not. However, given that powerful interests (such as business lobby groups) frequently influence what is included within legal definitions of crime, the term ‘crime’ is sometimes used by criminologists to describe social harms that have not yet been legally defined as criminal.<sup>41</sup> This

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<sup>35</sup> MacCarrick, above n 33.

<sup>36</sup> Thomas Berry, *The Great Work: Our Way into the Future* (Harmony/Bell Tower, 1999); Claire Williams, ‘Wild Law in Australia: Practice and Possibilities’ (2013) 30 *Environmental Planning and Law Journal* 259.

<sup>37</sup> Douglas Fisher, ‘Jurisprudential Challenges to the Protection of the Natural Environment’ in Michelle Maloney and Peter Burdon (eds), *Wild Law – in Practice* (Routledge, 2010); David Schlosberg, *Defining Environmental Justice: Theories, Movements, and Nature* (Oxford University Press, 2007); Rob White, ‘Ecocentrism and Criminal Justice’ (2018) 22 *Theoretical Criminology* 342.

<sup>38</sup> Higgins, *Earth is our Business*, above n 25.

<sup>39</sup> Higgins et al, above n 24.

<sup>40</sup> White, 2018, above n 21.

<sup>41</sup> See, for example, Avi Boukli and Justin Kotze (eds), *Zemiology: Reconnecting Crime and Social Harm* (Palgrave Macmillan, 2018); Paddy Hillyard and Steve Tombs, ‘From “Crime” to Social Harm?’ (2007) 48(1) *Crime, Law and Social Change* 9; Paddy Hillyard et al (eds), *Beyond Criminology? Taking Harm Seriously* (Pluto Press, 2004); Simon Pemberton, *Harmful Societies: Understanding Social Harm* (Policy Press, 2016).

includes harms related to and stemming from global warming. Thus the employment of the term ecocide has both a rhetorical dimension (oriented toward stigmatising certain acts and omissions) and an aspirational element (oriented toward criminalisation of these acts and omissions).

### *C Responsibilities for Ecocide*

From the point of view of criminal justice institutions, debates over ecocide could consider whether the crime should be a 'strict liability' offence (prosecuted regardless of the intent of the perpetrator due to the seriousness of the harm) or subject to *mens rea* assessment (the mental element of criminal law that speaks to intent, recklessness and foreknowledge).

Commentators such as Higgins argue that ecocide should be construed as a crime of strict liability.<sup>42</sup> The rationale behind this is that the crime of 'ecocide' is inherently very serious (it would not be used to describe the harms associated with littering, for example) because it involves harms of considerable scale, and frequently it is states and corporations which are the perpetrators. It is the seriousness of the harm that ultimately counts.<sup>43</sup>

For Higgins, human-caused ecocide is a responsibility of governments *and corporations*, and these entities should therefore be legally bound to ensure that any business practice that causes extensive damage or destruction of an ecosystem is put to an end.<sup>44</sup> It is this conception of responsibility that likewise informs discussions of ecocide and climate change.<sup>45</sup>

Narrow sectoral interests embedded in present socioeconomic dynamics are driving global warming as well as attempts to regulate or tax the emissions that contribute to it.<sup>46</sup> Meanwhile, those least responsible for, and least able to remedy the effects of climate change, are the worst affected by it.<sup>47</sup> For example, Indigenous people reliant upon clean water and arable lands for their livelihoods suffer greatly when large industrial projects – such as the Alberta Tar Sands project in Canada – negatively

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<sup>42</sup> Higgins, *Earth is our Business*, above n 25.

<sup>43</sup> In this account, ecocide is not considered a crime of intent, particularly given that most heads of state or corporations do not purposefully set out to commit ecocide. However, under certain conditions the foreknowledge and intent is there – this is true, for instance, when the destruction of the environment is part of a strategic move to reach some other goal, as in the case of environmental destruction in times of war.

<sup>44</sup> Higgins et al, above n 24.

<sup>45</sup> White, above n 21.

<sup>46</sup> See, for example, Harriet Bulkeley and Peter Newell, *Governing Climate Change* (Routledge, 2010).

<sup>47</sup> Christian Baatz, 'Responsibility for the Past? Some Thoughts on Compensating those Vulnerable to Climate Change in Developing Countries' (2013) 16(1) *Ethics, Policy and Environment* 94; Bulkeley and Newell, above n 46; Page, above n 17; Vandana Shiva, *Soil Not Oil: Environmental Justice in an Age of Climate Crisis* (South End Press, 2008). Ecocide is not socially (or, indeed, ecologically and species) neutral. It is the poor, the marginalised, the dispossessed and the vulnerable that bear the brunt of environmental destruction. In this sense, the victims are human and non-human, living and non-living, as human rights are ignored and landscapes devastated.

affect their forests, rivers and soils.<sup>48</sup> In this particular example, the project also happens to be the largest single contributor to the increase of global warming pollution in Canada.<sup>49</sup>

Those who are central in causing the problem are also those most able (at least initially) to escape the consequences of their actions. For the perpetrators of the harm, justice is rarely applied; nor is the crime officially recognised as a 'crime'. From a green criminology perspective, the challenge is to criminalise those individuals, corporations, industries, and governments that, even in the light of overwhelming scientific evidence, through acts or omissions, continue to contribute to the problem. State-corporate collusion of this nature is literally and directly transforming the conditions of life on planet Earth. From the point of view of climate justice, this is wrong and needs to be described for what it is: intentional and systematic ecocide.

#### IV CARBON CRIMES OF THE POWERFUL

Profound social and ecological polarisation is reflected in the 'climate divide' associated with global warming. As Nigel South notes:

[c]limate change is producing a new set of global dividing lines, now between those at most risk and those at least risk. This 'climate divide' is recognised in many ways but arguably not on a widespread basis or with full appreciation of what it really means. In essence, the climate divide represents a further extension of the inequitable state of the affairs of humanity, one in which the conditions producing climate change are contributed to most overwhelmingly by rich consumer societies but which will impose the greatest costs and resultant miseries on the already poor and newly developing nations.<sup>50</sup>

The climate divide is not only between countries but reflects profound class and other social inequalities within countries and globally.<sup>51</sup> Fundamentally, contemporary ecocidal tendencies are intertwined with specifically capitalistic processes (such as commodification) and the financial interests of the global elite.

#### *A Ecocide Stemming from System-Wide Processes*

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<sup>48</sup> Damien Short, *Redefining Genocide: Settler Colonialism, Social Death and Ecocide* (Zed Books, 2016).

<sup>49</sup> Michael Klare, *The Race for What's Left: The Global Scramble for the World's Last Resources* (Metropolitan Books, Henry Holt and Company, 2012).

<sup>50</sup> Nigel South, 'Climate Change, Environmental (In)security, Conflict and Crime' in Stephen Farrell, Tawhida Ahmed and Duncan French (eds), *Criminological and Legal Consequences of Climate Change* (Hart Publishing, 2012) 109, 109.

<sup>51</sup> Oxfam, *Reward Work, Not Wealth* (Briefing Paper, January 2018).

The systemic pressures associated with the global capitalist mode of production engender the exploitation of humans, ecosystems and species, and the degradation of the environment via pollution and waste.<sup>52</sup> The result is global warming and climate change.<sup>53</sup> The problem is the dominant political economic system.

The capitalist mode of production has its origins in Europe and first developed extensively in the form of the Industrial Revolution from the mid-1700s. It has been argued that '[c]limate change is a consequence of the transition from biodiversity based on renewable carbon economies to a fossil fuel-based non-renewable carbon economy. This was the transition called the industrial revolution'.<sup>54</sup> This entrenchment of a fossil fuel-based economy has created considerable economic and political inertia against change. Yet it is important to acknowledge that it is the specifically capitalist nature of industrialisation that transformed nature in degrading ways and contributed to ecological imperialism on a world scale.<sup>55</sup> Two hundred years of industrial revolution has been driven and underpinned by powerful forces (nation-states, companies, armies) pursuing sectional interests. This has been achieved through global imperialism, colonialism and militarism that have served to entrench a dominant worldview and the material basis for certain types of production, consumption and reproduction. In other words, it is a particular political economy, embodying specific relations of power and interest (in the form of the capitalist ownership and control over the means of production), that is fundamentally the driver of global warming (via exploitation of natural resources as commodities and for private profit).<sup>56</sup>

Environmental harms (many of which are serious enough to warrant the label 'crimes') are committed in the pursuit of 'normal' business outcomes and that involve 'normal' business practices.<sup>57</sup> This can be distilled down somewhat by reference to specific industries, such as the 'dirty industries' of coal and oil and how they engage in particularly damaging practices. But the overarching imperative to expand and

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<sup>52</sup> Paul Stretesky, Michael Long and Michael Lynch, *The Treadmill of Crime: Political Economy and Green Criminology* (Routledge, 2014).

<sup>53</sup> White, above n 21; Peter Newell and Matthew Paterson, *Climate Capitalism: Global Warming and the Transformation of the Global Economy* (Cambridge University Press, 2010).

<sup>54</sup> Vandana Shiva, *Soil Not Oil: Environmental Justice in an Age of Climate Crisis* (South End Press, 2008) 130.

<sup>55</sup> Alistair Greig and John van der Velden (2015) 'Earth Hour Approaches' (25 March 2015) *Overland*.

<sup>56</sup> White, above n 21.

<sup>57</sup> Dawn Rothe and David Friedrichs, *Crimes of Globalisation: New Directions in Critical Criminology* (Routledge, 2015); Dawn Rothe and David Kauzlarich, *Crimes of the Powerful: An Introduction* (Routledge, 2016); Steve Tombs and David Whyte, *The Corporate Criminal: Why Corporations Must be Abolished* (Routledge, 2015).

increase production and consumption nonetheless applies to all industries plugged into the global capitalist mode of production.<sup>58</sup> The net effect of this is anthropocentric climate change.

The specific organisational form that global capitalism takes is that of the transnational corporation. Corporations act and operate across borders, and involve huge investments of resources, personnel and finances. They are also amalgamating (via mergers and take-overs) and expanding (via horizontal and vertical integration of business operations). Their environmental 'crimes' are occasionally explicit and legally acknowledged (as in the case of BP and the Gulf oil spill). More often than not, however, the social and ecological harms associated with transnational corporations are not criminalised.<sup>59</sup>

It has been observed that there are several interrelated legal fictions relating to corporations that foster and sustain systemic corporate wrongdoing.<sup>60</sup> These include the ideas that the registered corporation is deemed to be a separate legal person, acting in its own right; that a corporation cannot be guilty of a criminal offence, because the corporation needs others to think and act; and that corporate wrongdoing pays, because the structured criminogenic nature of the corporation is almost always avoided in cases where real people are actually prosecuted.<sup>61</sup> There are complexities here that need to be teased out, pertaining for example to the specific criminal status of the corporation as a distinct legal personality, the responsibility (designated or otherwise) of individual corporate managers, and the place of investors (that is, shareholders) with respect to corporate criminality. Who or what is criminally responsible is less than straightforward, particularly in the context of the doctrine of limited liability in corporate law.<sup>62</sup>

These intersecting interests tend to congeal around one central fact. That is, the first duty of the corporation is to make money for shareholders, placing executives and managers under a duty to put their corporation's best interests first. This makes them ruthless and predatory, and willing to externalise costs and harms, regardless of the lives destroyed, the communities damaged and the environments and

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<sup>58</sup> John Foster, *Ecology Against Capitalism* (Monthly Review Press, 2002); David Harvey, *A Brief History of Neoliberalism* (Oxford University Press, 2005).

<sup>59</sup> See Joel Bakan, *The Corporation: The Pathological Pursuit of Profit and Power* (Constable, 2004); Harry Glasbeek, *Wealth by Stealth: Corporate Crime, Corporate Law, and the Perversion of Democracy* (Between the Lines, 2004); Tombs and Whyte, above n 57.

<sup>60</sup> Glasbeek, above n 59.

<sup>61</sup> Ibid. See also Jonathon Clough and Carmel Mulhern, *The Prosecution of Corporations* (Oxford University Press, 2002); Tombs and Whyte, above no 57.

<sup>62</sup> Bakan, above no 59.

species endangered.<sup>63</sup> Morality, in this context, is contingent upon local social, economic and regulatory conditions. Where corporations can get away with immoral cost cutting, profitable activities that are nonetheless harmful to others, and unfair market advantage, they will.<sup>64</sup> This impulse to place profit before anything else is an integral part of global capitalist competition. There is an identifiable nexus between capitalism as a system, and environmental degradation and transformation. Corporations commit an enormous number of offences, and they reoffend regularly. This is not exceptional behaviour, but the norm.<sup>65</sup>

### B *Business and Government*

In the context of social and political struggles over power and resources, it is not surprising that there has been considerable resistance to adoption of ecocide as an international crime. This is, in part, because nation-states are implicated in perpetuating activities that contribute to this crime. For example, state-corporate crime relates to both acts (such as reliance upon dirty energy sources) and omissions (such as failure to regulate carbon emissions).<sup>66</sup> Failure to act now to prevent global warming – and climate change denial or contrarianism itself – has been described as criminal.<sup>67</sup> Nation-states such as the United States (especially under Donald Trump) have demonstrated little interest in passing laws that will bring them and their private sector partners to book.

A key feature of this crime is that it occurs in the context of foreknowledge and intent. That is, ecocide arising from global warming, while marked by uncertainty in regard to specific rates and types of ecological change, is nonetheless founded upon generalised scientific

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<sup>63</sup> Ibid.

<sup>64</sup> Such tendencies are evident in recent disclosures about tax havens, fraud and misappropriation pertaining to many of the world's rich and powerful in the so-called *Paradise* and *Panama Papers*. International Consortium of Investigative Journalists, *An ICIJ Investigation: Paradise Papers: Secrets of the Global Elite* <<https://www.icij.org/investigations/paradise-papers/>>; International Consortium of Investigative Journalists, *An ICIJ Investigation: The Panama Papers: Exposing the Rogue Offshore Finance Industry* <<https://www.icij.org/investigations/panama-papers/>>.

<sup>65</sup> For detailed support of this claim, see Glasbeek, above n 59; Bakan, above n 56; Tombs and Whyte, above n 57.

<sup>66</sup> State-corporate crime has been defined as 'illegal or socially injurious actions that result from a mutually reinforcing interaction between (1) policies and/or practices in pursuit of the goals of one or more institutions of political governance and (2) policies and/or practices in pursuit of the goals of one or more institutions of economic production and distribution'. Ray Michalowski and Ron Kramer, *State-Corporate Crime: Wrongdoing at the Intersection of Business and Government* (Rutgers University Press, 2006) 15.

<sup>67</sup> Donald Brown, 'Is Climate Science Disinformation a Crime Against Humanity?', *Guardian* (online) 2 November 2010 <<https://www.theguardian.com/environment/cif-green/2010/nov/01/climate-science-disinformation-crime>>; William Tucker, 'Deceitful Tongues: Is Climate Change Denial a Crime?' (2012) 39 *Ecology Law Quarterly* 831.

knowledge that profound change is unavoidable unless carbon emissions and deforestation are not radically reduced.<sup>68</sup> If carbon emissions are at the forefront of the causes of global warming, then the obvious question is why continue to emit such dangerous planet-altering substances into the atmosphere? Climate change and the gross exploitation of natural resources are leading to the general demise of the ecological status quo – increasing the need for the crime of ecocide.<sup>69</sup>

Ecocide associated with global warming does not occur in a social and political vacuum. Rather, it stems directly from the nexus between business and government. Ecocide is substantially driven by systemic imperatives within which the nation-state has a central role. Put simply, at a structural level, the ‘everyday practices’ that sustain environmental degradation and global warming are ingrained in Western advantage and lifestyle.<sup>70</sup> Decisions are justified on the basis that ameliorative action could jeopardise corporate profits or even survival, as well as the economic prosperity and/or economic development of particular nation-states.

Activities are promoted and protected under the guise of arguments about the ‘national interest’ and the importance of ‘free trade’, and reflect specific sectoral business interests. Accompanying support for oil, coal and other ‘dirty’ industries, for example, there is resistance to global agreements on carbon emissions and use of carbon taxes. Simultaneously, there is agreement between nation-states and transnational corporations about desired (and profitable) changes in land use, such as deforestation associated with cash crops, biofuels, mining, and intensive pastoral industries. Indeed, tropical deforestation is now responsible for some 20 per cent of global greenhouse emissions.<sup>71</sup> States have given permission and financial backing to those companies that are engaged in precisely what will radically alter the world’s climate the most in the coming years: greenhouse gas emissions.

Resource extraction companies tend to receive privileged support from governments regardless of the damage they cause to specific environments or the contributions they make to environmental destruction

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<sup>68</sup> McGarrell and Gibbs, above n 18.

<sup>69</sup> Jacqueline Hellman, ‘The Fifth Crime Under International Criminal Law: Ecocide?’ in Dominik Brodowski et al (eds), *Regulating Corporate Criminal Liability* (Springer, 2014) 273; Deniz Tekayak, ‘From “Polluter Pays” to “Polluter Does Not Pollute”’ (2016) 71 *Geoforum* 62.

<sup>70</sup> Robert Agnew, ‘The Ordinary Acts that Contribute to Ecocide: A Criminological Analysis’, in Nigel South and Avi Brisman (eds), *Routledge International Handbook of Green Criminology* (Routledge, 2013) 58.

<sup>71</sup> Tim Boekhout van Solinge, ‘Equatorial Deforestation as a Harmful Practice and a Criminological Issue’ in Rob White (ed), *Global Environmental Harm: Criminological Perspectives* (Willan Publishing, 2010) 20.

and global warming.<sup>72</sup> Public policy is framed in terms of supporting big business (through tax breaks and via policies that allow continued carbon emissions to occur), and corporations in their turn are generous contributors to the coffers of mainstream political parties. Both states and companies regularly engage in techniques of neutralisation whereby they decry their critics, deny the extent and nature of environmental harm, and excuse themselves from accountability for environmental destruction accompanying economic enterprise.<sup>73</sup>

Moreover, in pursuit of ownership of and control over natural resources, and to exploit these for particular purposes, governments and companies have singularly and in conjunction with each other worked to break laws, bend rules and undermine participatory decision-making processes. Sometimes this takes the form of direct state-corporate collusion (state-corporate crime); in other instances, it involves manoeuvring by government officials or company executives to evade the ordinarily operating rules of planning, development, and environmental impact assessment.<sup>74</sup>

Climate change criminals thus pervade existing global systems of finance and production. They are at the heart of the present-day economic engine. Insofar as this is the case, responding to the generators of climate change will require systemic change at the ground level.

### *C Responsibilities for Climate Change Ecocide*

This debate over responsibility, however, is not only about ‘systems’. It also incorporates specific actors and agencies. In this regard, most individuals living in Westernised societies are, at some level and to some degree, complicit in climate change insofar as they participate in activities that contribute to global warming. For example, everyday consumption is accomplished through the embedded experiences and habits of daily life that include high meat consumption and reliance upon private petroleum-

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<sup>72</sup> Ron Kramer, ‘Carbon in the Atmosphere and Power in America: Climate Change as State-Corporate Crime’ (2013) 36(2) *Journal of Crime and Justice* 153; Ron Kramer and Ray Michalowski, ‘Is Global Warming a State-Corporate Crime?’ in Rob White (ed), *Climate Change from a Criminological Perspective* (Springer, 2012) 71; Vincenzo Ruggiero and Nigel South, ‘Toxic State-Corporate Crimes, Neo-liberalism and Green Criminology: The Hazards and Legacies of the Oil, Chemical and Mineral Industries’ (2013) 2(2) *International Journal for Crime, Justice and Social Democracy* 12.

<sup>73</sup> Brisman, ‘The Cultural Science of Climate Change Contrarianism’, above n 16. While beyond the scope of the present article, mention has to at least be made of the proposed Carmichael Mine project in Queensland – a classic case of multi-level government collusion with private corporation Adani for a project that has profound environmental implications. See Justin Bell-James and Sean Ryan, ‘Climate Change Litigation in Queensland: A Case Study in Incrementalism’ (2016) 33 *Environmental and Planning Law Journal* 515.

<sup>74</sup> Rob White, ‘Corruption and the Securitisation of Nature’ (2017) 6(4) *International Journal of Crime, Justice and Social Democracy* 55.

based automobiles.<sup>75</sup> But the origins of these activities lie in structures over which the participants have little or no direct control, such as agribusiness domination of food production, and inadequate provision of public transportation services. In a similar vein, the carbon footprint of countries such as the United States is often cited as evidence of the privileges and advantages of people living in these countries, and therefore their collective responsibility for the lion's share of carbon emissions.<sup>76</sup> Yet there is massive disparity in wealth and consumption within highly unequal societies such as the US and, just as importantly, the system as a whole is precisely structured and designed to enhance commodity production, consumption and the realisation of value through the cash nexus. The system functions in accordance with the dictates of those who effectively plan and control social production, and this control lies predominantly in the hands of large corporations (and their backers in government).<sup>77</sup>

The three key questions typically asked about climate change responsibilities relate to contribution to the problem, foreknowledge and precaution, and ability and responsibility to pay.<sup>78</sup> In response to these questions, sophisticated metrics and matrices have been designed in order to calculate potential payments in the light of many diverse factors pertaining to responsibility and capacity.<sup>79</sup> A limitation of this kind of work, however, is the over-riding focus on nation-states.<sup>80</sup> Such accounting seems largely to ignore the nuances of political economy and the dominance of the capitalist mode of production. Instead, class politics is refracted through the lens of nation-state responsibilities. Moreover, the discussion tends to be pitched around compensation rather than regulation and control.

Countries are comprised of citizens and residents who have differential access to the levers of power, and who command uneven access to and mobilisation of resources. It is governments of nation-states that bear responsibility for climate change policy, but they do so in the context of the interpenetration of corporate and state power. Critical discussion of responsibility, accountability and prosecution must privilege these factors

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<sup>75</sup> Agnew, above n 70.

<sup>76</sup> Mark Levene and Daniele Conversi, 'Subsistence Societies, Globalisation, Climate Change and Genocide: Discourses of Vulnerability and Resistance' (2014) 18 *International Journal of Human Rights* 281.

<sup>77</sup> Commercial media is also big business, and this too is reflected in reporting of environmental issues and events, including climate change. See Katrina Clifford and Rob White, *Media and Crime: Content, Context and Consequence* (Oxford University Press, 2017).

<sup>78</sup> White, above n 20.

<sup>79</sup> See Baatz, above n 47; Stockholm Environment Institute, *Climate Equity Reference Calculator* <<https://www.sei.org/projects-and-tools/tools/climate-equity-reference-calculator/>>.

<sup>80</sup> Page, above n 17.

and relationships. Most importantly, there is a need to shift the primary focus from states (countries) to incorporated entities (that include both private and state corporations).<sup>81</sup> A certain level of specificity is possible insofar as the extent of harm and foreknowledge of the harm can be pinpointed to particular states and companies, at particular times.

For instance, quantitative analysis of historical fossil fuel and cement production records of the 50 leading investment-owned, 31 state-owned, and nine nation-state producers of oil, natural gas and cement from 1854 to 2010 showed that they produced 63 per cent of cumulative worldwide emissions of industrial carbon dioxide and methane.<sup>82</sup> The largest investor-owned and state-owned companies produced the highest amount of carbon emissions. It is also known that more than half of all industrial emissions of carbon dioxide have occurred since 1986, when the risks of global warming were becoming better known. These same major entities possess fossil fuel reserves that will, if processed and emitted, intensify anthropogenic climate change. We also know that the largest 500 companies account for over 10 per cent of total greenhouse gas emissions produced each year, and 31 per cent of the emissions emitted globally each year is attributed to the 32 energy companies amongst the top 500 companies.<sup>83</sup> We know who the climate change criminals are.

## V CONCLUSION

Responding to climate change demands focus on the role of contemporary political economic systems and of the powerful in creating the conditions for further global warming while abrogating their responsibilities to deal with the substantive changes and suffering arising from climate change. Systems can be distinguished from specific actors:

*Systems* may be deemed to be blameworthy, but not to be responsible. As such, they may well attract social and moral condemnation, can be analysed in terms of their social, economic and cultural dynamics, and be challenged through social transformation and revolutionary change. But they are not able to be prosecuted for their crimes. Here, it is *perpetrators*, specific individuals and companies who can and should be deemed responsible in the eyes of the law.<sup>84</sup>

From a criminological perspective, it is necessary to shift focus from structures, such as the global capitalist mode of production, to agency,

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<sup>81</sup> White, above n 20.

<sup>82</sup> Richard Heede, 'Tracing Anthropogenic Carbon Dioxide and Methane Emissions to Fossil Fuel and Cement Producers, 1854–2010' (2014) 122 *Climate Change* 229.

<sup>83</sup> Sharon Mascher, 'Climate change justice and corporate responsibility: Commentary on the International Bar Association recommendations' (2016) 34(1) *Journal of Energy and Natural Resources Law* 57.

<sup>84</sup> White, above n 21, 112.

which in this instance refers to corporate managers, corporations themselves and state officials. It is the latter which can be specifically assessed in terms of conduct, intent and liability. Importantly, ‘what happens to agents within a system also ultimately has an impact on the structure of the system as a whole and so is important in its own right’.<sup>85</sup>

A key defining feature of ecocide perpetrated by the powerful is that such crimes involve actions (or omissions and failures to act) that are socially harmful and carried out by elites and/or those who wield significant political and social authority in the particular sectors or domains of their influence. Such harms are inseparable from the ultimate beneficiaries of the actions of the powerful. Powerful social interests not only perpetuate great harms, they also obscure and mask the nature of harm production. They are also best placed to resist the criminalisation process generally.<sup>86</sup> Given these realities, criminological understandings of crimes of the powerful also refer to harm-based criteria (in addition to existing legal definitions) in describing certain activities as crimes. As well as expressing moral condemnation, the use of such language is to some degree aspirational – describing acts that *ought* to be criminalised because of the nature and extent of the harms they incur.

The strategies that nation-states use to deal with environmental concerns are contingent upon the social and class interests associated with political power. The power of transnational corporations finds purchase in the interface between the interests and preferred activities of the corporation and the specific protections and supports proffered by the nation-state. The latter can be reliant upon or intimidated by particular industries and companies. Tax revenue and job creation, as well as media support and political donations, hinge upon particular state-corporate synergies. This undermines the basic tenets of democracy and collective deliberation over how best to interpret the public or national interest.

The fight for climate justice must fundamentally involve assertion of democratic control over land, air, water and energy. This means, for example, changing how companies operate, including the flow of their investments, and how their activities are regulated by the nation-state.<sup>87</sup> In some instances, it also means divesting present corporate owners of their private property. In all cases, it means re-asserting the public interest. Corporations and nation-states must be held to account.

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<sup>85</sup> Ibid.

<sup>86</sup> Rothe and Kauzlarich, above n 57; Tombs and Whyte, above n 57.

<sup>87</sup> For example, the ‘divest movement’ involves efforts by activists to get mainstream institutions to stop investing in fossil fuels – in other words, to divest from putting funds into the dirty industries of late capitalism and to leave what remains of the fossil fuels in the ground. See Jack Redpath, ‘UTAS Must Lead by Example and Drop Fossil Fuels’, *Mercury* (online) 17 October 2015 <<https://www.themercury.com.au/news/opinion/talking-point-utas-must-lead-by-example-and-drop-fossil-fuels/news-story/ed9eb34d5930862c3df2366c00605962>>.

The essence of law reform is politics. The pursuit of climate justice will necessarily involve pushing the boundaries of the *status quo*. As this article has demonstrated, new categories of criminalisation are also required to address the most destructive and transforming of harms of this era. Climate change is having an indelible impact on Planet Earth, now and into the future. To counter global warming demands that we re-conceptualise the nature of the problem, tackle it at the source, and call it what it is – ecocide on a grand scale.