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# The Antecedents and Emergence of a 'Green' Criminology

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INTRODUCTION

Some of us grew up in a period when pollution and environmental issues were not well

understood although in some cases they were absolutely evident and visible.

In Nigel's case, an early childhood memory from the early 1960s is of being on a bus in an

industrial city in the north of England surrounded by the haze of smog outside the bus and

clouds of cigarette smoke from within the bus.

Around the same time as this childhood bus ride, Rachel Carson was writing her path-

breaking work Silent Spring (1962) drawing attention to the chemical assault on nature, and

Tom Lehrer was singing:

If you visit American city,

You will find it very pretty.

Just two things of which you must beware:

Don't drink the water and don't breathe the air.

Pollution, pollution,

They got smog and sewage and mud.

Turn on your tap and get hot and cold running crud.

See the halibuts and the sturgeons

Being wiped out by detergents.

Tom Lehrer: 'Pollution', (1964/65)

http://www.youtube.com/watch?feature=player\_embedded&v=JPrAuF2f\_oI

Conversely, in Rob's case the early memory is swimming, fishing and drinking from pristine lakes during summer vacation time in Canada. Acid rain and city smog would eventually change this.

The air quality inside and outside some public transport may have improved but regrettably it's still the case that 'the detergents' are wiping out the sturgeons, and the lakes are certainly no longer as clean and fresh as they once were.

For us this is a subject that combines criminology, public health and rights – those of humans and other species. This paper provides a short, swift history and overview of the idea of a green criminology, its precursors and the development of definitions and perspectives, and draws attention to a few suggestive issues.

In some ways, 'green criminology' is breaking new ground and proving a catalyst for innovative work on many topics. But in other ways, it simply reflects earlier insights and investigations and we first provide some indications of such precursor concerns. The paper then presents early statements of the idea of a green perspective for criminology, followed by examples of definitions and ways in which the field has been scoped and conceptualised. It concludes with thoughts on a few key areas for the field and signposts the two accompanying papers in the series from the Presidential Panel on Green Criminology at the ASC in 2013.

# PRECURSORS TO A GREEN CRIMINOLOGY

It would be possible to cite many examples of pioneering writers, investigators, scientists, journalists, campaigners and others who improved society, living conditions and longevity through their contributions to advancing the causes of public health, factory and water

inspection, regulation of food supply and so on. Others were quick to understand the need to protect the environment and also expressed concern for the preservation of non-human species.

However, as in many areas of regulation and control, improvement and action have often taken a long time to make their impact. For example, in London in 1898, Sir William Blake Richmond founded the 'The Coal Smoke Abatement Society' as a charity (later the National Society for Clean Air, rebranded again in 2007 as Environmental Protection UK), with the mission to campaign for a response to the heavy pollution of the air at the time and to draw upon scientific debate about appropriate alternatives to use of coal and coke (Thorsheim, 2006). But it took another twenty years before the 1926 Public Health Smoke Abatement Act was passed (Kessell, 2006: 73-74). [And debate still rages, today, over alternatives to coal, especially in mineral dependent economies such as Australia].

But then, of course, populations, cities and industries grew, and so did ever-greater dependence on coal-fired power, heating and oil-powered motorised vehicles. 'Fog and smoke' frequently combined as 'Smog' and, in London in 1952, this resulted in what was called the Great Smog or Killer Smog, estimated as responsible for at least 4,000 deaths; (for image of Piccadilly Circus, London, shrouded in smog see Boettcher, 2011). And, interestingly, this enveloping cloud also provided an environmental cover of low visibility that emboldened some criminals, with The Guardian newspaper of the day reporting 'a busy time for thieves' (Guardian Archive, 2012). In turn, the Great Smog resulted in further legislation with the passage of the Clean Air Act of 1956 - nearly sixty years after the foundation of the Coal Smoke Abatement Society (Boettcher, 2011).

Of course, despite legislation and regulation, clean air has not become the norm in most cities in Europe or indeed in any industrialised or developing nation with concentrations of populations consuming carbon energy (see Walters, 2013). The European Environment Agency recently reported that although EU nations have made 'considerable progress over recent decades to reduce the visible signs of air pollution, with cities now no longer shrouded in blankets of smog' it is still the case that 'air pollution is causing damage to human health and eco-systems' (Kinver, 2013). This is, of course, also the case in the USA and, sadly, even more so in the nations like China and India which are racing along the path of development, industrialisation and growth.

But for many decades, the social sciences - including sociology and criminology - largely failed to grasp the importance of the *consequences* of all this industrialisation and growth. As Foster and Holleman (2012: 1626) note, 'the dominant post-Second World War sociological tradition was seen as having embraced a human-exemptionalist paradigm, in which human beings in technologically advanced societies were considered exempt from natural-environmental influences.'

This does not mean that sociology and political economy were wholly unreflective or uncritical on such matters. Marx has relevance and Veblen was pioneering in insights into consumer culture, for example. Of particular interest though are some of Max Weber's thoughts on the occasion of his visit to the USA where he considers the relationship between the hunger of capitalism and the intensifying spiral of wants and consumption. Weber warned that there would be limits to the free availability of land and resources that had partly given rise to the notion of 'American exceptionalism' and he was interested in the question of how social structure, class and status would be affected and change as such raw materials were used up?

"We must not forget" [he wrote] "that the boiling heat of modern capitalist culture is connected with the heedless consumption of natural resources, for which there are no substitutes. It is difficult to determine how long the present supply of coal and ore will last." (Weber, 1946: 366).

Here Weber anticipates the 'peak oil' issue and the proposition that there must be 'limits to growth'.

Twentieth century economic growth, wars and post-war economies of re-construction, followed by post-1950s expansionism were all resource-hungry periods shaped by pressures and ideologies concerned to maximise Gross Domestic Product (GDP), increase industrial output and, as Vance Packard (1960: 71) insightfully suggested on the cusp of the consumerism of the 1960s, stimulate a market that did not merely build physical or technical obsolescence into goods but could also 'wear the product out in the owner's mind' requiring constant renewal and returns to the market.

The role of consumption and use of resources in the face of 'limits to growth' now present serious and urgent questions. Environmental sociology and green strands within criminology also now recognise this and extend consideration and concern to non-human species and the biosphere generally. Of course, there have been exceptions to this general earlier neglect of the harms and damage done to the environment. Although a 'green criminology' (explicitly articulated as such) can be seen to emerge from the early 1990s, the critical study of environmental crime predates a 'green' criminology as such (see White, 2013a; and essays reprinted in South and Beirne, 2006).

Work on corporate and organised crime for example had exposed the control and manipulation of waste disposal processes, and the production and distribution of toxic chemicals (Block and Scarpitti 1985; Ruggiero 1996; Salzano 1994; Szasz 1986). Work on the appropriation of animals, birds and fish through 'traditional' legal or illegal activities, such as hunting or poaching or illegal fishing, had looked at motives, legislative and regulatory measures and official environmental law enforcement (Fernandez and Luxmore, 1997; and see review of literature in Eliason, 2003). And, finally, the concept of environmental justice was a profoundly important contribution and followed from sociological and community-based work on empirical links between toxic environments and certain categories of people (inevitably the poor, the dispossessed and people of colour), and related this to campaigns against the discrimination and racism that frequently determine the distribution of environmental advantage and disadvantage (Bullard, 1990, 1994; Hofrichter, 1993).

### **EARLY STATEMENTS**

Early statements of an ecologically sensitive or green oriented criminology did not find the audience they deserved. For instance, Slovenian criminologist Janez Pecar (1981) published an early example of the argument that 'environmental crime or deviance against the environment is only partially studied' in criminology and the subject neglects 'global issues'. Pecar also anticipated recent work that argues environmental harm is a product of the actions of major actors such as corporations and governments as well as the daily ecocidal consumption behaviours of ordinary individuals. Unfortunately Pecar's essay was only published in Slovenian and it has only received wider attention in recent years through the

work of Slovenian colleagues publishing in English (e.g. Mesko, Dimitrijevic and Fields, 2010).

In North America, Mike Lynch published a short article in 1990 that could still stand as a 'Manifesto' statement, called, 'The Greening of Criminology: A Perspective on the 1990s'. This appeared in an issue of *The Critical Criminologist* but as a small journal, with a limited circulation, reaching a network of colleagues principally in North America, this also failed to reach many others with similar interests in other countries. (Needless to say the piece is now much cited and reprinted).

But the fact that these pioneering statements from Lynch and Pecar (and probably others?) did not make a more significant impact at the time of publication means that in fact there is an interesting intellectual tale to tell. And this is a tale that confirms the relevance of green or environmentally sensitive ideas to contemporary thought and practice in criminology and socio-legal studies.

From around 1990 to the end of that decade, the time was right for the emergence of a 'green criminology', as a number of scholars around the world started to teach, write and communicate about the very same issues and concerns (see for example, South, 1998; Clifford, 1998). A community of common interest can be identified covering the bio-physical and socio-economic consequences of various sources of threat and damage to the environment - whether pollution, resource degradation, threats to non-human species, biodiversity loss or climate change.

The idea of a criminology interested in environmental crimes and damage represented something abroad and in the air – part of the zeitgeist – and certainly indicative of a sensibility and awareness among social and natural scientists of the challenges posed by human impacts on the environment. It was, for example, touched on in 1998 by Margaret

Zahn in her Presidential Address to the ASC entitled 'Thoughts on the future of criminology'.

Zahn observed that:

...pollution of our rivers and oceans is causing global mass extinctions and a significant reduction in biodiversity. The impacts for life on this planet are far-reaching. Particulate pollution annually kills ... four times [more people than] ... homicide. ... With more focus on environmental crime will come a new definition of victims to include species other than humans and a definition of offenders to include those who pollute for convenience ... [and] for profit.

Just as Sutherland's white-collar crime expanded our crime paradigm (1949), ... environmental crime will change it in the future. (Zahn, 1999)

Totally independently, though in retrospect not surprisingly, the same questions were being tested and asked by various scholars around the world regarding the relevance of criminology in an age of environmental change.

#### **DEFINING THE FIELD**

Green Criminology can be defined as the theoretical and empirical study of activities and actions that impact in a damaging way on the natural environment, diverse species (human and non-human) and the planet (White and Heckenberg, 2014; South and Brisman, 2013). We can distinguish between 'primary' and 'secondary' crimes and harms, the former entailing direct impact and the latter a degree of mediation. For example, secondary or symbiotic green harms and crimes may be the result of the exploitation of conditions that follow environmental damage or crisis (e.g. illegal markets for food, medicine, water) and/or

from the violation of rules that attempt to prevent or regulate environmental harm and responses to disaster (including numerous cases where States violate their own regulations) (South, Brisman and Beirne, 2013).

It is important to emphasise that a green criminology is not a 'green *theory*' - it is most helpfully seen as a *perspective* (South, 1998). The model or precedent here is Plummer's (1979) argument concerning 'Labeling': that this key concept in the sociology of deviance and criminology '... should not be equated with a theory or a proposition but should be seen as a perspective .... And because of this it can harbour several diverse theoretical positions.'

Similarly, a 'green' criminology also encompasses 'diversity'. It provides a loose framework for the coming together of intellectual, empirical and political orientations toward harms, offences and crimes related to the environment, different species and the planet.

Green criminology is *invitational*. By this we mean that it is an 'open' perspective and framework (South, Brisman and Beirne, 2013). In one form, it most clearly originates from within the tradition(s) of critical criminology but at the same time there is no monopoly on engagement with these vital issues and a 'green criminology' is in many or most ways coterminous with similar important endeavours such as conservation criminology, environmental victimology, environmental socio-legal studies and the application of crime prevention techniques to combat poaching and wildlife trafficking (see White and Heckenberg, 2014).

It also seeks to connect with other disciplines and be broadly based in its alliances and networks, in the sources of evidence it needs to draw upon, and in the variety of audiences that must be addressed.

As green criminology has grown as a specific area of concentrated scholarship and research so, too, it has developed distinct sub-areas or approaches that express quite different conceptualisations of the problem and how best to respond to it. Some of these are briefly summarised in Box 1. Importantly, any one writer may be aligned with more than one of the approaches listed here – the categorisations are not mutually exclusive.

# Box 1

# **Approaches within Green Criminology**

# **Radical Green Criminology**

Designates a generic term to describe a *broad radical orientation* towards issues pertaining to *environmental harm* and crimes against nature.

Key concepts and concerns:

ecological, environmental, and species justice anti-capitalist, anti-anthropocentric (or human-centred) environmentalist, animal rights

Exemplar: Lynch & Stretesky (2003), who provide a trenchant critique of corporations and who argue that green criminology ought to be defined precisely by its radical critique of the status quo.

# **Eco-Global Criminology**

Designates a specific concern with the *transnational nature of environmental harm* and the ways in which transgressions against humans, ecosystems and animals manifest at a global level.

Key concepts and concerns:

climate change

transnational environmental crime

ecological justice

Exemplar: White (2011), who argues that ecological criteria should underpin analysis, and that such analysis should be highly cognisant of the importance of scale, that incorporates the intersections of the local, national, regional and international.

# **Conservation Criminology**

Designates a specific concern with *natural resource conservation* and management that draws upon criminological concerns, and with environmental law enforcement and *environmental crime as legally defined*.

Key concepts and concerns:

conservation

natural resource management

risk assessment and analysis

Exemplar: Gibbs et al. (2010), who argue for an integration of criminology with natural resource disciplines and the risk and decision sciences, so that study of environmental crimes and risks better incorporate interdisciplinary scholarship.

# **Environmental Criminology**

Designates a conventional criminological approach to dealing with environmental crime as legally defined, drawing mainly upon place-based criminology (also known as 'environmental criminology') that concentrates on *situational crime prevention*.

Key concepts and concerns:

situational crime prevention

market reduction approach

illegal wildlife trade

Exemplar: Wellsmith (2010), who argues that place-based criminology and situational crime prevention have much to offer in reducing environmental harm, especially in areas such as 'wildlife crime' and endangered species conservation.

# **Constructivist or Cultural Green Criminology**

Designates an approach to the study of environmental harm and crime from the point of view of constitutive / constructivist or cultural criminologies emphasising how categories and labels are constructed socially, politically and through markets. Key concepts and concerns:

language of criminological analysis

subjective elements of crime constitution

media and cultural studies

Exemplars: Brisman (2012), who argues for the need to deconstruct categories such as 'crime', 'criminal' and 'victim' in analyses of environmental harm, so that underlying relations of power and the labelling processes can be exposed, as in the case of contrarianism and climate change; Brisman and South (2014) who call for a green-cultural criminology to examine media representations of environmental phenomena, the commodification of nature, the social construction of consumerism, and popular cultural demands for change.

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**Specieist Criminology** 

Designates a focus on *specieism* as the main target for criminological research and *critique of* 

anthropocentrism in the construction of environmental issues insofar as species and

individual members of species are seen to have intrinsic value and rights.

Key concepts and concerns:

specieism as a form of discrimination

abuse of animals, including factory farms

illegal wildlife trade

Exemplar: Beirne (2009), who argues that abuse and degradation of animals has to be

analysed in its historical and social contexts, and that major questions need to be answered

regarding how, why, where and when animal abuse occurs

Source: updated from White, 2013a

The hallmark of green criminology, regardless of diversity of opinion and the plurality of views, is that proponents argue for more attention to be given to environmental and

ecological issues.

A 'green' criminology shares the classic characteristics by which Sutherland defined the

criminological task -investigating social phenomena and studying the 'processes of making

laws, of breaking laws, and of reacting toward the breaking of laws' (Sutherland, 1924: 3).

This provides a number of simple but clear questions – why and how are laws made? why

and how are they broken? what should be done in response? But also raises important

questions about why some damaging activities are **not** subject to laws and enforcement? And

a green criminology is therefore particularly interested in 'harms' as well as crimes (Beirne and South, 2007; White, 2013b).

As in other areas of criminology, the question arises of whether the focus of study should be solely that which is 'criminal' legally defined, or whether other actions and activities that can be argued or proven to be harmful or worthy of concern, should also be embraced. In fact, for a green perspective this is fairly easy to answer if the primary aim is to engage with damage, degradation and depletion affecting the earth, environment and all species, for much of this is caused by *legal* behaviour. Legal harms are therefore of central interest to green criminologists.

The wide range of topics and issues studied can only be summarised here – covering for example:

- transnational crime and toxic waste and wildlife trafficking
- biopiracy and abuse of rights of indigenous peoples
- the impacts on the environment and on human rights and health of mining, logging
  and trading in conflict minerals, timber and e-waste, organized crime and waste
  disposal causing environmental damage, and more.

One major contribution and an overdue development within criminology has been to direct greater attention to harms and criminal acts committed against non-human species. The idea of speciesism has been employed to describe the devaluing and prejudicial treatment of other species as less worthy of concern, compassion or justice than humans. The second paper in this series, by Ragnhild Sollund, deals with these issues in greater depth (see also Sollund, 2008, 2011, 2012 a,b, 2013).

Environmental issues can also be categorised according to three different types of harm. So called *brown* issues tend to be defined in terms of urban life and pollution (e.g., air quality); *green* issues mainly relate to wilderness areas and conservation matters (e.g., logging practices); and *white* issues refer to science laboratories and the impact of new technologies (e.g., genetically modified organisms). These are set out in Box 2 below.

### Box 2

# **Colouring Environmental Issues**

### 'Brown' issues

- air pollution
- pollution of urban stormwater
- pollution of beaches
- pesticides
- oil spills
- pollution of water catchments
- disposal of toxic/hazardous waste

# 'Green' Issues

- acid rain
- habitat destruction
- loss of wildlife
- logging of forests
- depletion of ozone layer
- toxic algae

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invasive species via human transport

water pollution

'White' Issues

genetically modified organisms

food irradiation

in vitro processes

cloning of human tissue

genetic discrimination

environmentally-related communicable diseases

pathological indoor environments

animal testing and experimentation

nano technologies

Source: drawing from White, 2005.

The significance of conceptualising environmental issues in this way is that it demonstrates

the link between environmental action (usually involving distinct types of community and

environmental groups), and particular sites (such as urban centres, wilderness areas or

seacoast regions). Some issues tend to resonate more with members of the public than others;

other issues generally only emerge if an accident or disaster brings it to the fore. The complex

relationship between human and non-human 'rights' is played out in practice through the

importance of 'place' in the lives of diverse communities.

A 'green criminology' provides a timely framework and umbrella category for considering

this wide range of issues – although it should be noted that other names or labels might also

be used to cover this field, such as eco-critical criminology, eco-criminology, eco-global criminology, and conservation criminology. Which leads us to the question, 'should this whole field simply be called environmental criminology'? In fact, the term is increasingly used in this sense, reflecting the way that the word 'environment' is used in public discussion and media. In criminological terms, of course, hesitancy has come from a desire to avoid confusion with the longer established association of the word 'environmental' with the study of the incidence of crime as distributed according to the spatial features of the built, urban environment and human patterns of activity. But perhaps a signal about the future use of terminology comes from Bottoms (2012) in his chapter on 'Developing Socio-spatial criminology' in the 5<sup>th</sup> edition of the Oxford Handbook of Criminology, where he notes that the title of his chapter was partly chosen to avoid the possible confusion that might arise if 'environmental crime' were used as a description 'because it is sometimes used to refer to the important emerging field of 'green' criminology'.

This might be a step in the direction of distinguishing *between* fields. But, at the same time, it also seems that there is some *convergence* of different theoretical approaches and empirical methods concerned with environmental matters. For example, situational crime prevention and crime mapping techniques are increasingly applied to conservation problems; biological and forensic science techniques provide evidence about toxic harms and criminal activity; geographical information systems have obvious value in trying to monitor environmental damage; and so forth.

A different, timely and thought-provoking example of the convergence of an interest in green criminology, environmental issues and the applicability of 'classic' criminological theories is

provided by Agnew's recent work on climate change (2011: 22) in which he provides an overview of climate change and its effects and argues that

climate change will promote crime by increasing strain, reducing social control, weakening social support, fostering beliefs and values favorable to crime, contributing to traits conducive to crime, increasing certain opportunities for crime, and creating social conflict.

This then is a sketch of some of the foundations, and the breadth, of a green criminological perspective. The two accompanying papers build on these foundations.

We would like to conclude by drawing attention to three criminological and sociological 'matters arising' in this development so far. Needless to say, this is not an exhaustive list.

# Risk and Iatrogenesis

One notable prism through which the escalation of environmental harms has been viewed is the idea of the Risk Society (Beck, 1992) and in some ways this mirrors the idea of *iatrogenesis*, developed by Ivan Illich (1976) and employed in criminology (or rather *against* criminology) by Stan Cohen (1988), to capture the idea that 'doing good' can also lead to 'doing bad' and, in this case, the advance of science can leave difficult legacies.

This prompts us to consider how many of our environmental problems and challenges are risks and consequences wrought by modernity, globalization and transnational production and reproduction, leaving legacies of 'irreversible threats to the life of plants, animals and human beings' (Beck, 1992: 12-13). The message here is that it is highly relevant to criminology to maintain awareness of new and emerging technologies, for example in biosciences and nano-technology, as well as paying attention to the legacy of past mistakes and

current challenges, such as the dangerous disposal of radioactive waste and more recently of e-waste.

The implementation of public policy is sometimes of particular interest to criminology **not** because of what is intended but because of outcomes that are unintended or paradoxical. This is discussed further in the third paper in this series.

Victims and Environmental Justice

Some have suggested that green criminology pays less attention to victims than to offenders or offences. This does not seem quite right as a considerable amount of work in green criminology and environmental justice is concerned with victimization. For example,

Walters (2010) notes that many

acts of eco crime create devastating conditions for the lives of local people. The contamination of drinking water, the degradation of soil and the pollution of air and land all expose people (usually those in poor and developing countries) to substantial health risks ....

[And] As Hauck (2007) has observed, acts of eco crime are linked to the poverty and social dislocation, as well as the mental and physical debilitation, of people who are victims of corporations and states that deliberately violate environmental agreements.

However if the criticism does have merit then it is obviously important to develop a perspective on the 'missing victims' of environmental crimes, 'quasi-crimes' or harms and aim to attribute to those affected the legitimate status of victim and the legal standing which

accords them rights as victims. Recent work by Hall (2013) is a useful first step in this direction.

**Ecocidal Tendencies and Remedies** 

We may now be approaching what some scientists have referred to as our 'planetary boundaries' – the extent to which we are already over or nearing our planet's ability to cope once nine 'boundaries are breached by damage (these are: climate change, biodiversity loss, biogeochemical cycles, ocean acidification, water consumption, land use, ozone depletion, atmospheric particulate pollution, and chemical pollution) (The Economist, 2012). Human contributions to these impending breaches are not only those on the major scale of the BP Deepwater Horizon case or the destruction or pollution that may be acts or consequences of war, they also include the daily behaviour of all of us, as consumers engaged in the slow ecocide of the planet (Agnew, 2011, 2013).

#### CONCLUDING REMARKS

The world has become increasingly environmentally-conscious - because there is more to be consciously concerned about than ever before. Within criminology, there is now increasing interest and momentum in a developing field of 'green', 'conservation' and environmentally oriented work. This 'green field' for criminology involves the study by criminologists of environmental harms (that may incorporate wider definitions of crime than are provided by strictly legal definitions); environmental laws (including enforcement, prosecution and sentencing practices); and environmental regulation (systems of criminal, civil and administrative law designed to manage, protect and preserve specified environments and species, and to manage the negative consequences of particular industrial processes) (White, 2008, 2011).

We began by acknowledging that no claim is made here to be setting out a 'new criminology'. What is important is that, whatever the name or terminology, a new (or rediscovered) criminological interest in environmental and related matters is growing and this could be no more timely than at present. The next two papers in this series elaborate on specific aspects of this enterprise. In doing so, they raise issues and concerns that will be of considerable relevance and significance to criminology for many years to come.

### **REFERENCES**

Agnew, R. 2011. Dire forecast: A theoretical model of the impact of climate change on crime. Theoretical Criminology 16: 21-42

Agnew, R. 2013. The ordinary acts that contribute to ecocide: A criminological analysis. In The Routledge International Handbook of Green Criminology, eds. N. South and A. Brisman, London: Routledge.

Beck, U. 1992. Risk Society: Towards a New Modernity. London: Sage Publications

Beirne, P. 2009. Confronting Animal Abuse: Law, Criminology, and Human-Animal Relationships. New York: Rowman and Littlefield Publishers.

Beirne, P., and N. South. Eds. 2007. Issues in Green Criminology: Confronting harms against environments, humanity and other animals. Cullompton: Willan.

Block, A., and Scarpitti, F. 1985. Poisoning for Profit: The Mafia and Toxic Waste in America. New York: William Morrow.

Boettcher, D. 2011. The UK's oldest environmental charity faces closure. BBC News Science and Environment. http://www.bbc.co.uk/news/science-environment-15924233

Bottoms, T. 2012. Developing socio-spatial criminology. In The Oxford Handbook of Criminology 5<sup>th</sup> edn., eds. M. Maguire, R. Morgan and R. Reiner, Oxford: Oxford University Press.

Brisman, A. 2012. The Cultural Silences of Climate Change Contrarianism. In Climate Change from a Criminological Perspective, ed. R. White, New York: Springer.

Brisman, A. and South, N. 2014. Green Cultural Criminology: Constructions of Environmental Harm, Consumerism, and Resistance to Ecocide. London: Routledge

Bullard, R. 1990. Dumping in Dixie: Race, Class and Environmental Quality, Boulder. Colorado: Westview Press.

Carson, R. 1962. Silent Spring. Boston: Houghton and Mifflin.

Clifford, M. ed. 1998. Environmental Crime: Enforcement, Policy, and Social Responsibility. Gaithersburg, Maryland: Aspen Publishers.

Cohen, S. 1988. Western crime control models in the Third World: Benign or Malignant. In Against Criminology ed. S. Cohen, New Brunswick: Transaction Books.

Economist, The. 2012. Boundary conditions: The idea of planet-wide environmental boundaries, beyond which humanity would go at its peril, is gaining ground. The Economist, Jun 16<sup>th</sup>: web page: http://www.economist.com/node/21556897.

Eliason, S. 2003. Illegal hunting and angling: the neutralization of wildlife law violations. Society and Animals: Journal of Human-Animal Studies. 11: <a href="http://www.societyandanimalsforum.org/sa/sa11.3/eliason.shtml">http://www.societyandanimalsforum.org/sa/sa11.3/eliason.shtml</a>

Eman, K., Mesko, G., and Fields, G.B. 2009. Crimes against the environment: green criminology and research challenges in Slovenia. Varstvoslovje: Journal of Criminal Justice and Security 11: 574-592.

Fernandez, C., and Luxmoore, R. 1997. The Value of the Wildlife Trade. WCMC Biodiversity Series 7. Cambridge: World Conservation Press,

Foster, J., and Holleman, H. 2012. Weber and the environment: Classical foundations for a post-exemptionalist sociology. American Journal of Sociology 117: 1625-1673

Gibbs, C., Gore, M., McGarrell, E., and Rivers III, L. 2010. Introducing conservation criminology: Towards interdisciplinary scholarship on environmental crimes and risks. British Journal of Criminology 50: 124-144.

Guardian Archive. 2012. How the Guardian reported on London's Great Smog of 1952. <a href="http://www.theguardian.com/theguardian/from-the-archive-blog/2012/dec/05/great-smog-london-1952-archive">http://www.theguardian.com/theguardian/from-the-archive-blog/2012/dec/05/great-smog-london-1952-archive</a>

Hall, M. 2013. Victims of Environmental Harm: Rights, Recognition and Redress under National and International Law. London: Routledge.

Hauck, M. 2007. Non-compliance in small-scale fisheries: a threat to security? In Issues in Green Criminology, eds. P. Beine and N. South, Cullompton: Willan.

Hofrichter, R. 1993. Toxic Struggles: The Theory and Practice of Environmental Justice. Philadelphia: New Society Press.

Ilich, I. 1976. Medical Nemesis: The Expropriation of Health. New York: Pantheon Books.

Kessell, A. 2006. Air, the Environment and Public Health. Cambridge: Cambridge University Press.

Kinver, M. 2013. Air pollution 'still harming Europeans' health'. BBC News Science and Environment, 15<sup>th</sup> October. <a href="http://www.bbc.co.uk/news/science-environment-24493530">http://www.bbc.co.uk/news/science-environment-24493530</a>
Lynch, M. 1990. 'The greening of criminology: A perspective on the 1990s'. The Critical Criminologist 2: 1-4 and 11-12.

Lynch, M., and Stretesky, P. 2003. The meaning of green: Contrasting criminological perspectives. Theoretical Criminology 7: 217-238.

Mesko, G., Dimitrijevic, D., and Fields, C. Eds. 2010 Understanding and Managing Threats to the Environment in South Eastern Europe. Dordrecht: Springer.

Packard, V. 1960. The Waste Makers. Harmondsworth: Penguin.

Pečar, J. 1981. Ekološka kriminaliteta in kriminologija. Revija za kriminalistiko in kriminologijo 34: 33–45. [See Eman, Mesko and Fields 2009]

Plummer, K. 1979. Misunderstanding labelling perspectives. In Deviant Interpretations: Problems in Criminological Theory, eds. D. Downes and P. Rock, Oxford: Martin Robertson. Ruggiero, V.1996. Organised and Corporate Crime in Europe: Offers that Can't be Refused. Aldershot: Dartmouth.

Salzano, J. 1994. It's dirty business: organized crime in deep sludge. Criminal Organizations. 8: 17-20.

Sollund, R. 2008. Causes for speciesism: difference, distance and denial. In Global Harms: Ecological Crime and Speciesism, ed. R. Sollund, New York: Nova Science Publishers.

Sollund, R. 2011. Expressions of specieism: the effects of keeping companion animals on animal abuse, animal trafficking and species decline. Crime, Law and Social Change 55: 437-451.

Sollund, R. 2012a. Speciesism as doxic practice versus valuing difference and plurality. In Eco-global Crimes: Contemporary Problems and Future Challenges, eds. R. Ellefsen, R. Sollund, and G. Larsen, Farnham: Ashgate.

Sollund, R. 2012b. Oil production, climate change and species decline: The case of Norway. In Climate Change from a Criminological Perspective, ed. R. White, New York: Springer.

Sollund, R. 2013. Animal trafficking and trade: Abuse and species injustice. In Emerging Issues in Green Criminology, eds. R. Walters, D.S. Westerhuis, and T. Wyatt, Hampshire: Palgrave Macmillan.

South, N. 1998. A green field for criminology? A proposal for a perspective. Theoretical Criminology, 2: 211-233.

South, N., and Beirne, P. Eds. 2006. Green Criminology. Aldershot: Ashgate.

South, N., and Brisman, A. Eds. 2013a. The Routledge International Handbook of Green Criminology. London: Routledge.

South, N., Brisman, A, and Beirne, P. 2013. A guide to a green criminology. In The Routledge International Handbook of Green Criminology, eds. N. South and A. Brisman, London: Routledge.

Sutherland, E. 1924. Criminology. Philadelpha: J. B. Lippincott Company

Szasz, A. 1986. Corporations, organised crime and the disposal of hazardous waste: an examination of the making of a criminogenic regulatory structure. Criminology 24: 1-27.

Thorsheim, P. 2006. Inventing Pollution: Coal, Smoke, and Culture in Britain Since 1800. Athens: Ohio University Press

Walters, R. 2010. Eco crime. In Crime: Local and Global, eds. J. Muncie, D. Talbot, and R.Walters, Cullompton: Willan.

Walters, R. 2013. Air crimes and atmospheric justice. In The Routledge International Handbook of Green Criminology, eds. N. South and A. Brisman, London: Routledge.

Weber, M. 1946. From Max Weber. New York: Oxford University Press.

Wellsmith, M. 2010. The applicability of crime prevention to problems of environmental harm: a consideration of illicit trade in endangered species. In Global Environmental Harm: Criminological Perspectives, ed. R. White, Cullompton: Willan Publishing.

White, R. 2005. Environmental crime in global context: Exploring the theoretical and empirical complexities. Current Issues in Criminal Justice 16: 271-285.

White, R. 2008. Crimes against Nature: Environmental Criminology and Ecological Justice. Cullompton: Willan.

White R 2011. Transnational Environmental Crime: Toward an Eco-Global Criminology. London: Routledge.

White, R. 2013a. The conceptual contours of green criminology. In Emerging Issues in Green Criminology, eds. D. Westerhuis, R. Walters, and T. Wyatt, London: Palgrave Macmillan.

White, R. 2013b. Environmental Harm: An Eco-Justice Perspective. Bristol: Policy Press.

White, R and Heckenberg, D. 2014. Green Criminology: An Introduction to the Study of Environmental Harm. London: Routledge.

Zahn, M. 1999. Presidential Address — Thoughts on the Future of Criminology.

Criminology 37: 1-16.