



Critical Perspectives on Green Criminology

An Edited Collection from the Internet Journal of
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Edited By
Angus Nurse

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Contents

Articles

An Introduction	3
<i>Angus Nurse</i>	
A Criminological Exploration of the Industrialisation of Pig Farming	12
<i>Tanya Wyatt</i>	
The Dirty South: Exploratory Research into Game Warden Fatalities in the United States	29
<i>Ryan Patten, Jonathan W. Caudill, and Sarah Messer</i>	
Insider Knowledge: Environmental Criminals' Perceptions on Crime, Corruption and CITES	44
<i>Charlotte Davies</i>	
Corporate Environmental Crime in the Electronic Waste Industry: The Case of Executive Recycling, Inc.	68
<i>Jacquelynn A. Doyon</i>	
Cleaning Up Greenwash: The Case for Enforcing Corporate Environmental Responsibility	90
<i>Angus Nurse</i>	
Conclusion: Linking the Green and the Mainstream	108
<i>Angus Nurse</i>	

Critical Perspectives on Green Criminology: An Introduction

Angus Nurse¹

Introduction

Criminologists have increasingly become involved and interested in environmental issues to the extent that the term 'Green Criminology' is now recognised as a distinct subgenre of the field. Within this unique area of scholarly activity, researchers consider not just harms to the environment, but also the links between green crimes and other forms of crime, including organised crime's movement into the illegal trade in wildlife or the links between domestic animal abuse, domestic violence and more 'serious' forms of offending such as serial killing. In essence, green criminology allows for the study of environmental and criminal laws, environmental criminality and the abuse and exploitation of nonhuman animals. Green criminology also provides a mechanism for rethinking the study of criminal laws, ethics, crime and criminal behaviour (Situ and Emmons, 2000; Lynch and Stretesky, 2003).

But within this broad framework there exists a potentially paradoxical question. Does green criminology allow for the application of a green perspective to mainstream criminal justice issues, or is green criminology solely a tool for applying criminological perspectives to distinctly green crimes? Critics might argue that green criminology is limited because environmental crimes are not the core focus of criminal justice systems and public concern about crime and safety. Undoubtedly this is true but as White (2007, 2012a) observes, given the potential for environmental harms to extend far beyond the impact on individual victims that are the norm with 'traditional' crimes of interpersonal violence and property crime, green crimes should be given importance if not priority within justice systems. Eco-global crimes such as the illegal trade in wildlife, pollution crimes and environmental harm are of significance not just because they are crimes that have a global reach and impact on both existing communities and future generations, but also because they affect and involve a range of nation states and different justice systems. By considering these issues, green criminology examines complex issues in criminological enquiry that extend beyond the narrow confines of individualistic crime which dominate criminological discourse and are the main focus of criminal justice policy. Simply put, green criminology thinks bigger.

This collection of essays is the first edited collection to be produced by the *Internet Journal of Green Criminology* (IJG). A rigorous selection process was applied to the collection with all submitted papers subject to anonymous review by at least two academics. Selection of papers followed an open submission process via the websites of the IJG and the International Green Criminology Working Group (IGCWG). As a result, papers were received from across the eco-global criminological spectrum and from scholars in a range of different locations, allowing for a wide range of green thought to be included. The collection thus draws together a range of potentially disparate ideas to provide for engaging discussion of current environmental crime discourse on animal protection (species justice) environmental harm and

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law enforcement (environmental justice) and socio-political discourse on the interaction between man and nature (ecological justice).

The Importance of Green Criminology

The decision to make this first IJC edited collection one on green criminology reflects the importance of the field as an emergent area in criminological discourse. Potter (2010: 10) argues that the link between environmental issues and criminology takes place on three levels.

- First, it identifies a range of crime and criminal justice activity relating directly to environmental issues.
- Second, green criminology allows the study of environmental harm in general as an extension of the well-established (and indeed fundamental) tradition within both sociology and criminology of critically questioning the very definition of crime and the core subject matter of criminology.
- Finally, it is possible to identify a number of areas where environmentalists can benefit from the experience of sociologists and criminologists working within more traditional notions of crime.

Potter's conception suggests that green criminology is concerned not just with distinctly environmental crimes but also with how studying green crimes can help to improve criminology. Sollund identifies that 'because of the multivariate character of problems relating to eco-global crimes, it is necessary to expand the boundaries of criminology as a discipline' (2012: 3). Rob White has also argued that environmental harms often 'transcend the normal boundaries of jurisdiction, geography and social divide' (2012a: 15). Eco-global (green) criminology as a discipline thus has importance as scientific and academic study concerned not solely with mainstream 'cops and robbers' crimes of interpersonal violence and individuality, but also addressing wider concerns with harms of a global nature and which have long-lasting consequences for human and non-human animals and the biosphere. White thus identifies eco-global criminology as a discipline requiring transnational and comparative research to identify differences and commonalities between nation-states 'whether related to pollution wildlife or other issues' (2012a:25).

Yet environmental laws (broadly defined) are often dealt with via administrative or civil law systems rather than criminal justice ones. Wildlife law is often a fringe area of policing whose public policy response is significantly influenced by NGOs (Nurse, 2012) and which continues to rely on NGOs as an integral part of the enforcement regime. White (2012b) identifies that third parties such as NGOs often play a significant role in investigating and exposing environmental harm and offending and have become a necessity for effective environmental law enforcement. Animal abuse and speciesism have become legitimate fields of study for green criminology in part because of the widespread nature of criminal activities that victimize animals but also because of growing evidence of the links between animal abuse and human violence (Linzey, 2009; Nurse, 2013a). Green criminology explores these issues in depth actively considering the link between crimes against the environment and non-human animals and mainstream criminology while critically evaluating what is known about environmental criminality. However, green criminology also considers the moral dimension of harms against animals that are legal but which should be made illegal. As a result, green criminology provides a means for examining fringe areas of policing and

criminality and applying critical thought to these issues. Green criminologists are, therefore often in the position of challenging contemporary criminal justice ideas and their theories provide a new way of looking at contemporary criminal justice problems.

At its best, green criminology attempts to both challenge and indeed overturn many common-sense notions of crime to reveal and challenge the reality of harms with wider social impact and negative consequences for the environment and human relations (Nurse, 2013a). Green criminology suggests the necessity of reappraising more traditional notions of crimes, offences and injurious behaviours requiring scholars and practitioners to examine the role that societies (including corporations and governments) play in generating environmental degradation. However green criminology is really an umbrella term for a number of theories that combine to make a green perspective on crime, as follows:

Environmental justice refers to the distribution of environments in terms of access to and use of natural resources. This broad term can be split into several different aspects of justice for the environment which include: Ecofeminism, Environmental Racism and the Red-Green Movement; summarised as follows:

- **Ecofeminism** was originally conceived as connecting ecology and women in a manner that integrates environmental feminism and women's spirituality concerns (Spretnak 1990). The paradigm criticised capitalist profit-growth orientation and the patriarchy, where male concerns often lead to environmental harms. It also connects the domination and exploitation of nature with that of women, arguing that women are more concerned with survival than men. Ecofeminism would argue that all forms of dominance are connected and that environmental equality could be achieved by returning to small-scale local economies, grass roots democracy and reorienting cultural values (Lynch and Stretesky, 2003:223).
- **Environmental Racism** simultaneously advocates for Environmental Justice and the elimination of racial discrimination in environmental decisions. This perspective argues that toxic factories, pollution and waste sites affect communities of colour more than Caucasians and that people of colour have a long history of struggling for environmental justice (Turner and Pei Wu, 2002). Within this perspective, criminology examines the conception that environmental protection exists primarily for the benefit of the elite who predominantly have access to rural areas and the benefits of a healthy environment; something often denied to poorer groups in which ethnic minorities are disproportionately represented. Critical perspectives on environmental racism thus contend that positive environmental developments and enhanced protection often 'disproportionately benefit white and upper-class people' (Turner and Pei Wu, 2002: 4) reinforcing white privilege while further marginalising ethnic minorities through denial of their environmental justice rights. The short term goals of Environmental Racism discourse are race-linked theory and action, which means considering positive racially-oriented action to combat discrimination. Long-term goals are the elimination of exposure to dangerous products and practices for all.
- **The Red-green Movement** 'relates economic oppression to environmental degradation' (Lynch and Stretesky, 2003:224). It applies a Marxist contextualisation to environmental harms arguing that environmental problems disproportionately affect the working class and poor as a product of the class society. Red-green perspectives on environmental justice consider methods of production and decision-making that exclude the working class effectively

disengaging them from environmental concerns. Thus any green revolution must begin in the workplace and empower workers with environmental responsibility and a tangible interest in protecting the environment.

Ecological Justice acknowledges that human beings are only one part of the planet and that any system of justice needs to consider the wider biosphere and species which depend on nature (Nurse, 2013b). **Species justice** discourse falls within ecological justice and considers the responsibility man owes to other species as part of broader ecological concerns. Man, as the dominant species on the planet, has considerable potential to destroy nonhuman animals, or, through effective laws and criminal justice regimes, to provide for effective animal protection (Nurse, 2013b). This includes animal rights, aspects of animal protection and criminality which impacts negatively on a range of nonhuman animals. Benton suggests that 'it is widely recognized that members of other animal species and the rest of non-human nature urgently need to be protected from destructive human activities' (1998: 149). This being true, contemporary criminal justice needs to extend beyond traditional human ideals of justice as a punitive or rehabilitative ideal, to incorporate shared concepts of reparative and restorative justice between humans and non-human animals. In effect, the criminal justice system needs to be modified to provide for a broad criminal justice perspective, justice for all sentient beings, not just for humans.

Defining Green Crimes

While green criminology takes a critical look at the issue of environmental harms and abuse of animals, not all things considered to contravene environmental protection norms or offend notions of green morality are crimes. The reality is that many things that NGOs and others object to are perfectly legal and there is an argument that only those things defined by criminal law as offences can really be classed as green crimes. Situ and Emmons (2000) define this as follows:

The strict legalist perspective emphasizes that crime is whatever the criminal code says it is. Many works in criminology define crime as behaviour that is prohibited by the criminal code and criminals as persons who have behaved in some way prohibited by the law.

(2000: 2)

In short, the strict legalist view is that crime is whatever the criminal law defines it as being by specifying those actions prohibited under the law. However, an alternative approach to animal and environmental legislation sometimes advocated by activists is the social legal perspective which argues that some acts, especially by corporations, 'may not violate the criminal law yet are so violent in their expression or harmful in their effects to merit definition as crimes' (Situ and Emmons, 2000: 3). This approach 'focuses on the construction of crime definitions by various segments of society and the political process by which some gain ascendancy, becoming embodied in the law' (Situ and Emmons, 2000: 3). Thus, like other crimes, green crimes are a social construction influenced by:

- social locations
- power relations in society
- definitions of environmental crimes
- media
- political process

This social-legal perspective also allows for consideration of symbiotic green crime which grows out of the flouting of rules that seek to regulate environmental disasters. There are, for instance, numerous minor and major examples of governments breaking their own regulations and contributing to environmental harms. Green criminology, by examining the social construction of green crimes considers changing social notions of the acceptability of environmental harm. For example, Nurse (2013b) notes that many forms of animal abuse historically accepted as legal have now been criminalised. The recent examples of the abolition of hunting with dogs in the UK and the introduction of new or revised animal abuse laws in various US states (Nurse, 2013b) illustrate changes in how animals are perceived and treated within contemporary society. But they also allow criminologists to study; new aspects of criminality as new offences are created, resistance to criminal laws as those who oppose such laws react negatively or continue their offending behaviour, and policing and desistance.

How the justice system should deal with green crimes and criminality is a core concern of green criminology, particularly given their lack of prominence within general criminal justice policy discourse. Rob White (2007) identifies the following three approaches:

1. **The Socio-legal approach** – which emphasises use of the current criminal law and attempts to improve the quality of investigation, law enforcement, prosecution and conviction of illegally-environmentally related activity.
2. **The Regulatory Approach** – An emphasis on social regulation, using many different means as the key mechanism to prevent and curtail environmental harm. This attempts to reform existing systems of production and consumption using enforced self-regulation and bringing NGOs into the regulatory process.
3. **The Social Action Approach** – Emphasis on need for social change predominantly through democratic institutions and citizen participation.

White's approaches reflect the fact that most jurisdictions have environmental regulations which seek to address environmental harms, and some form of animal protection law, providing legal protection for both companion and wild animals. However the approach to enforcement varies across jurisdictions and green criminology's critical evaluation of enforcement and policy effectiveness, from both a theoretical and practical perspective, has identified significant failings in implementation of environmental and ecological justice concerns (Nurse, 2013a, 2013b). In practice environmental regulations are often poorly enforced, while animal protection legislation may protect animals only in certain circumstances and from certain activities while retaining their subservience to human interests. Thus, while the need for improved standards of animal protection legislation has generally been adopted at least by western legislators, criminal justice systems often fail to afford priority to effective enforcement of wildlife legislation. Instead this becomes the responsibility of NGOs or civil justice agencies and the level of enforcement is heavily dependent on NGOs ideological concerns and availability of resources (Nurse, 2013). Dybing (2012), in a discussion of environmental regulation, identifies the need for arousing public consciousness about harmful environmental activities, the implication being that even where the state has a range of environmental enforcement tools available, public engagement is a vital tool in changing attitudes towards compliance. Without such engagement the social destruction caused by environmental harm will continue, especially where corporate profit motives encourage this and weak regulation allows corporate environmental criminality to continue.

About This Collection

Green criminology encompasses a range of broad green perspectives including the aforementioned ecological, environmental and species justice perspectives. The articles in this edited collection reflect that diversity and cover a range of topics from across the green criminological spectrum as follows:

In *A Criminological Exploration of the Industrialisation of Pig Farming*, Tanya Wyatt explores the non-human animal abuse that has been uncovered on English and Welsh pig farms as well as the abuse that takes place in abattoirs, from a green criminological and ethical perspective. The abuse of animals is a core species justice concern and reflects the status of animals as property subject to human interests, interest in developing animal rights, and also the failure of animal protection and animal welfare legislation and enforcement initiatives to adequately recognise and deal with the diverse nature of criminality involved in animal crimes (Nurse, 2013). Tanya Wyatt's chapter also conducts criminological exploration of the environmental degradation and human health concerns that are associated with large-scale animal processing facilities and makes recommendations on how the UK Government should proceed in regards to increased industrialisation of pig and other non-human animal farming.

In *The Dirty South: Exploratory Research into Game Warden Fatalities in the United States*, Ryan Patten, Jonathan W. Caudill, and Sarah Messer examine the factors that explain United States game warden fatalities. Conducting an analysis of data from the *Officer Down Memorial Page* website, they examine the nature of fatalities between 1886 and 2012. During this period there were 265 game warden fatalities, identifying that while fatalities are less prevalent now than in the past there are some distinct characteristics to officer fatalities. With almost no empirical research on this important topic, additional research is needed before more definitive conclusions can be proffered.

Complementing this, in *Offender Perspectives* Charlotte Davies examines how the views of offenders can be used to address environmental issues with a focus on how the data collected by NGOs can serve as a useful tool to examine offender attitudes and behaviour. The use of offender data and perspectives to develop policy is a core concern of criminology and an established aspect of criminological research methodology (Tewksbury, 2009). However this paper acknowledges that investigators collecting such data often do not make it available to researchers and underestimate its value in developing policy perspectives, highlighting the importance of developing interaction and collaboration between practitioners and green academics.

The global operations of Multi National (business) Entities (MNEs) can have significant negative consequences for the communities in which they operate and the wider environment. While businesses may in principle embrace the concept of ethical operations and human rights compliance claiming to implement these in their Corporate Social Responsibility (CSR) policies, the extent to which they do so, the content of these policies and their applicability to the concepts of environmental compliance varies considerably. Corporations who break environmental laws are also not always dealt with by criminal justice systems but may only be subject to civil or administrative sanctions that do not always deal adequately with the harm caused by corporations or directly address their criminal behaviour. Two papers in this collection deal directly with the problems of corporate environmental criminality.

In *Corporate Environmental Crime In the Electronic Waste Industry: The Case of Executive Recycling Inc.*, Jacquelynn Doyon examines how the booming industry of personal electronics has created a consequential market of electronic waste which has resulted in the transference of harm from the global north to the global south. Her analysis identifies how national and international legislation regulating the transfer of electronic waste (e-waste) has been unable to keep up with the pace of technology and consumerism, and has led to the movement of this hazardous and toxic waste from developed nations into still-developing and undeveloped nations. Jacquelynn highlights particular concerns about enforcement failures and a lack of prosecution within the US and via a case study of Executive Recycling, Inc. highlights the changes needed to bring the illegal electronics recycling issue under control. In *Cleaning up Greenwash: the Case for Enforcing Corporate Environmental Responsibility* Angus Nurse examines some of the difficulties caused by the current voluntary regime for regulating corporate environmental crime problems and the failure to enforce appropriate standards on corporations. He argues that application of corporate environmental responsibility should be a core part of the legal and regulatory system and that preventive enforcement is required rather than the current reactive and largely voluntary civil system.

In putting this collection together it is encouraging to see that both established and emerging scholars and practitioners have contributed material on various aspects of green criminological debate. The papers identify both the important theoretical perspectives that set green criminology apart from mainstream criminological thought, but crucially also consider areas where a green perspective can and should be applied to mainstream criminal justice issues. The collection contains a range of green criminological thought and hopefully includes something for all scholars of the green criminological perspective.

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A Criminological Exploration of the Industrialisation of Pig

Farming

Tanya Wyatt²

Abstract:

The UK has had factory farming of pigs and other animals for many years. Recently though, there has been movement to increase the scale on which this occurs. The change would see several thousand pigs on one farm turn into tens of thousands of pigs. Whilst, bioethicists and other animal rights advocates have addressed non-human animal welfare in agriculture, criminology, which plays an important role in negotiating and defining criminal behaviour, has added very little to this debate. In order to address this oversight and contribute to the non-human animal welfare discourse, this paper details the non-human animal abuse that has been uncovered on English and Welsh pig farms as well as the abuse that takes place in abattoirs from a green criminological and ethical perspective. It goes on to discuss the legislation that regulates animal welfare and if this legislation can tackle abuse in even more industrialised farms. There is also criminological exploration of the environmental degradation and human health concerns that are associated with large-scale facilities. Finally, the conclusion makes recommendations on how the UK Government should proceed in regards to increased industrialisation of pig and other non-human animal farming in light of the evidence presented.

Key Words: animal cruelty, animal rights, animal welfare, farm animals, green criminology

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Introduction:

Economic interests, environmental protection, and non-human animal welfare clash in many aspects of our society and this may be most pronounced in the agricultural sector. In the UK, agriculture is a key industry that provides incomes and jobs for many people. Yet at the same time agriculture can cause large-scale environmental harm and damage, and severe suffering of non-human animals. A variety of academic disciplines address this issue in various ways, but criminology has largely neglected animal welfare and agricultural concerns until recently. This is an oversight that needs to be rectified as the harm and possible criminalisation of such activities is worthy of exploration as will be made evident here. In relation to industrialised farming, the negative environmental consequences and non-human animal abuse can become more evident and pronounced as the scale of the farm or livestock operation increases. Whilst livestock rearing inherently raises issues relating to non-human animal welfare and consumption, larger livestock farms create additional ethical concerns stemming from the welfare of non-human animals in industrialised production, and the welfare of the environment and people in proximity to industrialised farms.

Whilst bioethicists and non-human animal welfare advocates have researched the rearing of livestock, criminology has been largely silent. This is problematic as criminology helps to shape and create definitions of harm, which may ultimately lead to regulations and criminal statutes. In order to aid in rectifying this oversight, this article analyses from a criminological standpoint, particularly that of environmental justice, if the move towards further industrialisation of non-human animal farming should be allowed to go forward. The ethical perspective of environmental justice enables elements of activities such as farming that are legal and therefore technically not crimes to be examined through the lens of criminology for the harm that these actions perpetrate (Lynch and Stretesky, 2003). Such a perspective recognises the harm and suffering of non-human animals created by industries that support human livelihoods and that competing principles within these spheres must somehow reach a compromise. With that foundation in place, it is important to state that an assumption underpinning this discussion is that in all likelihood pork consumption will continue even though there are sound arguments and alternatives to eating meat. This stems from cultural attachments to meat consumption and economic motivations in terms of employment and profit. In this context of continued meat eating, this paper explores industrialised pig farming from an environmental justice perspective and what then the UK government should do in relation to the proposed increased scale of such operations.

The green criminological exploration of industrialised pig farming, such as this proposed mega-farm will be addressed in three parts. First, the paper will explore the legal non-human animal abuse that is inherent in such large-scale livestock farming. Using evidence from the fairly recent state of UK pig farming (Viva, 2008), the non-human animal abuse that can be expected if the scale of pig farming was to increase even further is detailed. This discussion will describe the life cycle of the pigs including the neglect, disease, treatment, and living conditions that they are subjected to in crowded barns. Further discussion in this section is about the final abusive act – the industrialised slaughter of the pigs. Second, the paper highlights England and Wales legislation (since England is the location for a majority of UK pig farming) that might sufficiently regulate the industry in ways that will ensure that such abuse does not take place. In particular, this will include an examination of the Welfare of Farmed Animals (England) Regulations 2007. Legislation is only part of the picture though. Even if stringent laws are in place what next must be determined is if enforcement is to a degree that will prevent violations, which cause non-human animal abuse. Current UK compliance and examples from the US provide evidence as

to the compliance to environmental regulations and non-human animal welfare standards of some companies in the pig industry (Ruhl, 2001). This will lead to a discussion of the enforcement capability and inspection capacity in the UK to maintain environmental protection and high non-human animal welfare standards if the government allows high intensity pig farming (Defra, 2011a). The third section will highlight the environmental degradation and human health concerns linked to industrialised pig farming.

Finally, the paper will summarise the evidence of what a mega-farm in the UK might look like and what this means in terms of the non-human animal ethics and the sustainability of increased scale and industrialisation of livestock operations. Based upon this evidence, recommendations will be offered as to how the UK government should proceed in regard to regulating non-human animal farming in light of a possible shift to high intensity pig farming and mega-factory farming in general.

Non-human Animal Abuse and Industrialised Pig Farming:

Before detailing the practices of industrialised pig farming, some brief information about the size and scale of pig farming in the UK provides some useful context. Pig farming is one of the main livestock operations in the UK. Pigs are third in terms of sales after cattle and poultry (Defra, 2011a). According to the Royal Society for the Prevention of Cruelty to Animals (RSPCA, 2013), 10 million pigs are slaughtered each year in the UK and over 400,000 are kept as breeding stock. Whereas the total number of pigs overall has been declining in the UK, the profit from pig meat has been increasing (Defra, 2011a). According to the Department of Environment, Food and Rural Affairs (Defra) (2011a), in 2005 pig meat sales were £677,000,000 and had risen to £984,000,000 in 2010. The UK has historically maintained factory pig farms of a few thousand breeding and fattening animals, but in 2010 the first mega-farm, which would raise over 1,000 pigs a week sought building permits in Foston in Derbyshire near to a residential neighbourhood and a prison (MPP, N.D.). The approval of the mega-farm is still under debate and seeking planning permission. Conditions at the current style of factory farms will first be discussed before drawing on accounts of mega farms from the US.

The abuse that takes place during factory pig farming can be characterised as continual and pervasive yet is largely within the legal sphere. The environmental justice perspective questions harmful practices such as this that are allowed to continue and as mentioned will be drawn upon here when exploring pig farming. Pigs start life in dark metal barns sometimes with straw, sometimes without, and often with fully, though sometimes partially, grated floors (Viva, 2008). The straw is considered sanitary, reduces the number of injuries, and allows the piglets to play, which is thought to help in creating good meat (UK Agriculture, 2011a). The grating is so the manure can fall to the floor beneath the enclosures and then be washed into a slurry pond or waste lagoon where it will be stored. Piglets are born in birthing crates only slightly larger than the sow giving birth (Viva, 2008). Selective breeding, advances in genetics, better nutrition, and improved barns mean that the average number of piglets surviving has increased from eight in the late 1980s to more than 10 today (Eckblad, 2011). Industry practice is to snip piglets' incisor teeth within 24 hours of birth in order to protect the other piglets from harm (UK Agriculture, 2011a). Tails are also docked, or clipped, to prevent the pigs from biting each other's tails when they do come into contact with one another (UK Agriculture, 2011a).

This raises the question why the pigs are harming each other at all. A cursory exploration into the natural habitat of wild and feral pigs provides useful insight into this behaviour, and as to why factory farming as a practice is particularly stressful to pigs. Wild pigs and boars are forest foragers roaming several miles daily, digging and rutting for food, and rolling in the mud or dirt to clean and cool themselves (British Wild Boar, 2011). These natural behaviours all appear to be suppressed within the factory farm setting. Admittedly, selective breeding may have selected individuals where these characteristics were less pronounced, but there is evidence that domestication is limited in changing innate behaviours. This is supported by instances where farmed pigs have escaped and become feral. Feral pigs in Texas for example are observed engaging in all of the above listed behaviours (Taylor, 2003; Davis and Schmidly, N.D.).

Piglets nurse from their mothers for just one week (UK Agriculture, 2011b). After that the sow returns to the common housing area, which will be discussed shortly. Undercover video footage by the organisation Vegetarians International Voice for Animals (Viva, 2008) in various UK pig farms has shown this nursing period is a vulnerable time for the piglets with frequent deaths from starvation, being crushed, and apparently disease. Prompted by the pig industry film 'An Inconvenient Trough' portraying the struggles of UK pig farmers, Viva (2008) managed to covertly film nearly a dozen pig farms. As their director states, their investigation 'shows dead and rotting piglets inside units; sows imprisoned in metal crates little bigger than their bodies; pigs kept in barren concrete pens with no bedding; piglets huddled together, shivering; dying piglets left to suffer, alone' (Viva, 2008). Furthermore he states, 'the units exposed are typical of UK pig farms generally and reveal a picture of filth, overcrowding, dead and dying animals and widespread neglect' (Viva, 2008). Viva's investigation indicates that routine monitoring or welfare checks of these areas can be infrequent with piglet carcasses decomposing in the birthing crates as their siblings continue nursing. When monitoring is conducted, tens, sometimes hundreds, of dead piglets are removed and their bodies incinerated (Viva, 2008). Viva (2008) makes no mention of the result on regulation or government agencies that has come from their investigation. It can be noted though that near to the same time of this undercover expose, the industry was taking on a more self-regulatory system as will be discussed later. Criminologically speaking such conditions constitute suffering and harm and are therefore worthy of addressing both in terms of research and regulation. If welfare cannot be guaranteed through self-regulatory or official regulatory schemes, criminalisation of such abuse needs to be considered to ensure the health and well-being of pigs and other farm animals.

Once weaned, female piglets who survive will now be loose housed along with the adult sows mentioned earlier. Whereas historically they would have been kept in sow stalls unable to turn around, it is UK law now that sows are loose housed meaning they are in a larger communal space (UK Agriculture, 2011a). This complies with the EU Council Directive 2008/120/EC, which prohibits sows from being kept continually confined (Official Journal of the European Union, 2009). This change started to take affect in 1999 as EU legislation improving animal welfare came into force. UK pig farmers cite this added space as one of the sources of their struggles because the additional cost to house sows this way has made them less competitive with European markets where this pig welfare requirement has not yet been implemented (UK Agriculture, 2011a). The argument is weak though as providing this additional space for each sow adds only two pence of additional expense to every kilogram of pigmeat (House of Commons, 2009).

Stalls were in part deemed inhumane for long term use, but not for birthing, because of the metal grated flooring, which disrupts the pig's natural rooting behaviour (CIWF, N.D.). Constant standing on these metal floors damages the pigs' hooves sometimes to such a degree that they become immobile and unable to stand, or their feet become so infected that further measures have to be taken, such as intensive drug treatments or euthanasia (CIWF, N.D.). From the ethical perspective within environmental justice, such harm though permissible within the legal sphere becomes the subject of criminological inquiry. The suffering caused can and therefore should be avoided. In this instance, legislation has come to reflect the ethical stance of environmental justice as sow stalls are banned and will be so throughout the European Union in 2013 (CIWF, N.D.).

Male piglets are fattened as much and as quickly as possible for the meat market. The United States' response has been the liberal use of growth hormones to maximise weight gain whereas in the UK and the European Union this is not the case (UK Agriculture, 2011a). In the US, there is also routinised use of antibiotics in the pig feed to combat the diseases that inevitably occur in crowded, unhygienic barns where the feed is mostly an unnatural grained-based diet (Ruhl, 2001) rather than the foraging pigs would naturally engage in (Taylor, 2003). The poor ventilation, poor sanitation, and close quarters are all conducive to disease outbreaks, such as foot and mouth, swine flu, and sudden acute respiratory syndrome (SARS) (UK Agriculture, 2011a). There are regulations in the UK that antibiotics are not to be used routinely, but a study conducted by Defra in 2008 found 60-75% of farms were using antimicrobials in the weaner rations and in 20-62% of farms it was also in the grower rations. The wide range of use apparently fluctuated depending upon when the food samples were collected (Defra, 2008).

After the sow finishes nursing, she goes back into heat beginning the cycle again (UK Agriculture, 2011b). Sows in the US, as well as breeding males, have become so large that natural breeding is nearly impossible. Because of the difficulty, US mega pig farms use artificial insemination to impregnate the sows (Key and McBride, 2007) and this is becoming common place in the UK as well (The Pig Site, 2012). This requires securely immobilising the sow for the procedure and also enables the selective breeding that has been instrumental in the increase of pig litters (Ponette-Gonzalez and Fry, 2010).

Male pigs only live for 20-24 weeks and are slaughtered when they weigh between 60 and 100 kilograms (UK Agriculture, 2011b). Diets are specialised to get pigs to gain weight as quickly as possible during this limited lifespan. The fattened pigs are then transported in Lorries to the abattoir. In spite of pigs' known intelligence and capacity for pain, slaughter practices take little if any notice of the psychological, emotional, and physical suffering that is inflicted and visibly evident (Stevenson, 2001). In UK abattoirs, pigs are killed with the 'stun and stick' procedure, where first they are either electronically or gaseously (carbon dioxide) made unconscious and then have the blood vessels in their chests slit (Stevenson, 2001). The stun by electricity or carbon dioxide are both problematic because in both methods there is the chance that the pig will regain consciousness before or while their blood vessels are cut, causing severe pain (Stevenson, 2001). This occurs when 'a) too little electric current is used or the current is applied for too short a time or the stun is delivered to the wrong part of the head, or b) if the interval between stunning and sticking is too long, or c) because of a failure to sever both carotid arteries (or the blood vessels from which they arise)' (Stevenson 2001: 4-5).

Whereas veterinarians recommend only 15 seconds between the stun and the stick, the average time is 30 seconds (Stevenson, 2001). Fifteen percent of pigs have to be re-stunned and 20% are thought to regain consciousness while being killed (Stevenson, 2001). Electronic stunning equipment is required to have a fail safe to ensure if there is not enough charge to fully stun the pig that they are simply not delivered a painful shock, but many abattoirs do not comply with this (Stevenson, 2001). Carbon dioxide stunning methods cause respiratory distress and take several minutes to properly stun the pig (Stevenson, 2001). Most if not all abattoirs cut corners on procedures to save time; they are killing up to 300 pigs an hour (Stevenson, 2001).

The sticking process too is inhumane. Bleeding out will occur rapidly only if both main blood vessels are cut. Yet UK legislation requires only one to be cut and this is usual abattoir practice (Stevenson, 2001). This extends the time it takes for the pig to die thus increasing the likelihood that they will regain consciousness while bleeding out (Stevenson, 2001). As is evident from this process, there are many places where the pig will suffer while being killed. Admittedly, there is a case for no slaughter of pigs to take place, but as indicated, within current culture this seems to be an activity that will continue and therefore it is argued here from the environmental justice perspective of criminology that the humaneness of the practice must be examined. The existing methods of pig farming within the UK already encompass the aspects of abuse and suffering described above. Drawing on the ethical perspective that underpins this discussion, current practices already need to be changed. Yet in fact there is the prospect of an increase in scale. In the US, where pig farming is already occurring on such an increased scale, there is clearly evidence of as much if not more suffering and disease (Ruhl, 2001). Rightly, each context maybe different, so in order to discuss if this increased abuse would also occur were further industrialisation of pig farming allowed to occur in the UK, the legislation and regulation regarding non-human animal welfare needs to be explored.

UK (Non-human) Animal Welfare Legislation and Compliance:

As stated, a majority of pig farming in the UK takes place in England (Defra, 2008), so the legislation that will be explored is the Welfare of Farmed Animals (England) Regulations 2007 and the Animal Welfare Act 2006, which are the main regulatory instruments. Pig and non-human animal farming welfare standards underwent a significant change (improvement) in 2000 with the passing of substantially altered Welfare of Farmed Animals (England) Regulations. This banned the use of sow stalls, as mentioned previously, significantly changing the practice of pig farming. In 2007, further changes were made. Outside of one change discussed momentarily, welfare standards were maintained. This regulation stipulates that no non-human animal should be subject to unnecessary pain or suffering.

Initially, this appears quite progressive and positive for the non-human animals. Yet in practice such language is vague, resulting in conditions as described previously. 'Unnecessary' is open to a range of interpretations and quicker, less hygienic, and painful practices are adopted under economic justifications labelled as necessary. As Defra (2003: 3) states farmers need to safeguard animal welfare, but 'within the limitations of an efficient livestock industry'. Supplementary material produced by Defra (2003) recommends the Farmed Animal Welfare Council (FAWC)'s five freedoms as guidelines when assessing farm animal welfare. These guidelines are also contained in the EU Council Directive 2008/120/EC. These are freedom from hunger and thirst, freedom from discomfort, freedom

from pain, injury and disease, freedom to express most normal behaviour, and freedom from fear and distress (Defra, 2003). Whilst economics and non-human animal welfare need not be set against each other, economic interests are prioritised in the current system over these freedoms. This goes against the environmental justice perspective drawn upon here. Whilst human livelihood is a factor in decision-making within the agricultural sector, this does not need to be in conflict with non-human animal welfare. It is possible to restructure farming processes to meet these five freedoms whilst also ensuring productive human lives.

Of further concern is that there appears to be very little strength, political will, or capacity to enforce, institute, or implement these freedoms. A recent consultation was designed to see how inspections for those farms which were at low-risk of non-compliance could be reduced (Defra, 2011b). In fact, the inspection regime (as well as the farming) seems to be undergoing Americanisation as it adopts a more self-regulating model that will rely more on farm assurance schemes, which are voluntary, as a key way in which factory farms are monitored and inspected rather than official inspections (Defra, 2011b). Government officials of the local authorities and the Animal Health and Veterinary Laboratories Agency would focus their inspections on farms at highest risk of non-compliance (Defra, 2011b). Admittedly, with few inspectors and a limited number of inspections possible, this is one way of trying to assure compliance with welfare standards. Unfortunately though, it appears to be lax with multiple opportunities for non-compliant farms to avoid inspection and adherence to the legislation. With the current abusive conditions of many factory pig farms, less regulation and inspection does not bode well for animal welfare, nor does intensification of farming.

Most concerning in the latest Welfare of Farmed Animals (England) Regulations 2007 is the removal of Regulation 10, which required livestock workers and farm hands, to have access to, receive guidance on, and be aware of (non-human) animal welfare regulations (FAWC, 2007). This was supposedly removed because of the bureaucratic burden, which as FAWC (2007) argues is only £98 a farm. If farmers and abattoir workers etc. are not required to be versed in the welfare standards, how is it they will comply with them or maintain the proper standards? It is possible that this provides a loophole for those that are being non-compliant. Non-compliance with the Welfare of Farmed Animals (England) Regulations 2007 would include not checking on each pig's well being at least once a day; not tethering the pig unless undergoing some sort of treatment and then the tethering must not be painful; and not providing space to where the pigs can turn around, lie down, or see each other (FAWC, 2007). This last provision doesn't apply during farrowing (birthing), feeding, during procedures, during cleaning of the barns, and during transport (FAWC, 2007).

The number of investigations, cautions and/or convictions under these two acts in relation to pig farming is not readily apparent from government sources. What is available is the data regarding investigations and their outcomes from the RSPCA. The vast majority of the investigations conducted in 2012 by the RSPCA dealt with cruelty to companion animals, but they also secured 49 convictions under the Animal Welfare Act 2006 for cruelty to farm animals (Worsfold, 2012). This is an increase from 22 in 2011 and 15 in 2010 (Worsfold, 2012). It is not possible to extrapolate this data to efforts by authorities nor is it immediately apparent if this involves pig farms. What is noteworthy from this data is that (as with other crimes against animals and wildlife) enforcement is taken on by charities because of the limited capacity and/or political will of the government.

The antibiotics data given above and the evidence of abuse obtained by Viva (2008) on UK pig farms indicate that the pig industry already has a poor history of complying with the regulations. If we briefly look at the US pig industry, which has the scale of what is being proposed in the UK, further evidence can be found that adherence to regulations in this industry is lax. Conditions on pig farms are very similar to those indicated and potentially worse (Ruhl, 2001). Additionally, there are numerous instances there of intentional violations of waste holding requirements (improper waste lagoons) and of accidental leakages (Ruhl, 2001; Wing and Wolf, 2000). In order to save money, industrial farms will not invest in facilities that properly contain the pig excrement (Ruhl, 2001). As is demonstrated, *compliance* by the pig farming industry allows abuse of the pigs and endangers their health; as alluded to above, it also has implications to the wider environment and to the people living in proximity to these factory farms raising further environmental justice concerns.

Environmental Degradation and Human Health Concerns:

Keeping large numbers of non-human animals, including pigs, together inevitably has impact upon the land on which it takes place, the environment and wildlife surrounding the factory farm, and upon the people living nearby and working in the industry. The initial impact of industrial farming is of course either transforming an entirely new piece of land to farming or expanding a farm into the surrounding area. This can cause deforestation and loss of vegetation, which can have further effects on wildlife. After the physical impact to the landscape, the concern is pollution – air, soil, and water. The predominate form of air pollution that stems from pig farming is the amount of ammonia that accumulates in pig barns (Ruhl, 2001). This happens when the nitrogen from pig manure is drawn into the air (Ruhl, 2001). Ammonia from pig housing is estimated to be 9% of the total amount of ammonia in the UK (Defra, 2008). Near the large North Carolina feedlots in the US, which are in proximity to pharmaceutical and chemical industries, pig farms are thought to be responsible for 73% of the air pollution (Ruhl, 2001: 292). Localised air pollution can also occur in the housing from the particles that are mixed into the air when mucking out the straw bedding that is used in the pig industry (Defra, 2008). Ammonia and air particulates can cause respiratory irritation in both pigs and humans (Wing and Wolf, 2000). Housing more pigs together only exacerbates this problem.

Soil and water pollution stem mainly from the practice of collecting pig excrement in slurry ponds or waste lagoons (Ruhl, 2001). Ideally these slurry ponds will be well lined, preventing excrement from entering the soil, or ultimately the ground water. Slurry ponds have high concentrations of zinc, which is toxic to the soil that it does come into contact with (Defra, 2008). Zinc inhibits copper and iron absorption when ingested by humans and non-human animals which can lead to anaemia and liver and kidney damage (Brooks, 2009). The zinc is present, so is copper to a lesser degree, because pigs are routinely given these supplements to prevent diarrhoea and to promote growth (Defra, 2008). When slurry ponds do leak into the soil, besides zinc contamination, the soil is then leached of nitrates (Defra, 2008) thus making the soil unsuitable for other agriculture. When such accidents happen within the boundaries of the farm, this can endanger the health of the pigs and the ‘product’ that they are intended to be (Ruhl, 2001). To get rid of the slurry, it is spread on fields as fertiliser (Ruhl, 2001). First though, it must be diluted because, as indicated, in the storage state it is toxic. Massive amounts of fresh water are used to dilute the slurry to safer levels and make it possible to spray it on the fields (Ruhl, 2001). This practice has a high potential for spreading pathogens (Defra, 2008), which can infect the pigs, the land, and people. Once the soil is contaminated, there is a high chance of the water becoming polluted as well when

rain and run off carry the toxins into the ground water and open sources nearby (Ruhl,2001). This then can affect the human populations and surrounding environment. The proposed mega-farm is opting for another tactic to reduce the waste from the pigs. They are planning on building a biogas plant to run on pig faeces (MPP, N.D.). It could be argued though that this claim should be taken cautiously as the excrement still needs to be safely collected and stored and there are further concerns with the safety and pollution stemming from biogas facilities which are relatively new technology.

The pollution that is created by industrial pig farming does not stay confined within the borders of the farm. As indicated above, the air, soil, and water pollution that occur have the potential to effect the surrounding environment and wildlife. Loss of plant and animal biodiversity is possible with the excessive ammonia concentrations around industrial pig housing (Defra, 2008). Soil and water pollution can spread to adjacent areas harming both the vegetation and the non-human animals. As indicated above, there are fairly frequent and intentional leaks of slurry ponds in the US. For instance, the biggest recorded waste spill in North Carolina killed 10 million fish and stopped shell fishing in 364,000 acres of coastal wetlands (Ruhl, 2001: 286). This not only destroys the environment; it also destroys the industries reliant upon that environment. People then lose their jobs and businesses lose profits and face closure. Environmental degradation then tied to industrial pig and other farming has far reaching impacts – on environmental health and on other industries, which people rely on for income.

Damage to economic livelihood is not the only affect that the environmental degradation associated with industrial pig farming can have on people. There are also health concerns for those working at and living in proximity to these facilities. As with wildlife, humans can suffer from exposure to high concentrations of ammonia that are generated by housing large numbers of pigs together (Wing and Wolf, 2000). As mentioned, ground water and water ways can become polluted from slurry ponds or waste lagoons and this can spread disease and contamination to humans. It can also take away their access to fresh water as ground water is the source of water for many homes.

Of particular concern is the discriminatory nature of the zoning of industrial pig and other farms. Intensive farming is not found next to affluent neighbourhoods or stately homes. Such practices are isolated to more rural, often poorer areas with no or little social capital and political power (Wing and Wolf, 2000). This is a core concern of environmental justice – that of the discriminatory nature of environmental health hazards (Lynch and Stretesky, 2003). The current mega-farm proposal in England provides evidence of this divide as it is situated in close proximity to a women's prison (Viva, 2011); a group of marginalised people that had no voice in the creation or placement of this facility and have no ability to escape the potential impacts it will have on their health and well being.

Finally, there have been several studies that have found direct links between institutionalised non-human animal abuse, particularly in abattoirs, and an increase in non-human animal abuse (Whitely, 2011) and interpersonal human violence (Beirne, 2004; Fitzgerald et al 2009) in the communities adjacent to the abattoirs. Though a full review of these studies is beyond the scope of this paper, this provides evidence that there are not only non-human animal welfare concerns within industrialised farming, but also that such routinized violence has lasting and significant effects on the human employees and their

families. There are then many social, as well as environmental, concerns that stem from industrialised factory farming of pigs and other non-human animals. Again, from the environmental justice standpoint such agricultural practices must be examined in order to challenge the suffering within them and the social injustices that accompany them. This can then lead to abolition of these practices through generation of improved policies, which may include stricter regulation and/or increased criminalisation of abusive and discriminatory actions.

Discussion:

What then about a mega pig farm in the UK? What would a facility where thousands of piglets are born weekly look like? And what are the non-human animal welfare, environmental and human implications? As demonstrated, current pig farming is already fraught with non-human animal abuse – living conditions are stressful and unsanitary, mutilation is standard practice, and slaughter is inhumane. There is no indication from the enforcement of the standards established in the Animal Welfare Act 2006 or those in the Welfare of Farmed Animals (England) Regulations 2007 that further industrialisation of UK farming will have better non-human animal welfare. Nor does the EU Council Directive offer any further protection. Furthermore, from exploration of the compliance history of the industry as a whole with such legislation, a pattern of blatant disregard and non-transparency emerges. Several US states have already or plan to consider ‘ag-gag’ bills, which criminalise whistle blowing from factory farm workers (Sesana, 2013). Though these bills vary by state many of them also criminalise unauthorised filming or photos in farm factories, prohibit investigators from working in farm factories and require reporting of violations within short time frames that prevent a pattern of abuse from being established (Sesana, 2013). Apparently, the larger the operation the more actively they attempt to hide the truth of their activities. Again, there is nothing to indicate that a bigger facility in the UK with even more financial obligations and incentives would perform any better in terms of non-human animal welfare. On the contrary, the examples from the US, with some of the largest farms in the world, show that abuse is not only rampant and justified by the industry for the sake of profit, but also abuse is inherent in the very practice of industrialised pig farming.

The same is true for the environmental health of the actual farm and the surrounding land. More pigs in one area means more pollution; air pollution from the increased ammonia coming from more excrement; soil and water pollution from the increased amount of excrement and the potential for spills and leakages of the slurry ponds. Bigger facilities, as seen in the US, are not better at mitigating these dangers that are inevitable with housing that many pigs in one place. In industrialised pig farming, and farming of other non-human animals as well, welfare is compromised because of the inability or unwillingness, first, to manage the welfare of the multitudes of non-human animals kept in these operations and, second, the inability or unwillingness to cope with the large amounts of pollutants and toxins that accompany large scale non-human animal farming. Not only are the pigs victimised, but there is the potential for indirect human victimisation as well. People are harmed by the air, soil and water pollution and research points to the increase in abuse of non-human animals and people by people working in these violent surroundings. Furthermore, the people in proximity to industrialised agriculture are typically marginalised groups. This is likely to continue as any proposed industrialised farms in the UK would most likely be placed in areas away from affluent residents. Industrialisation then should not be the way forward.

Obviously, the push for industrialisation of farming comes from the desire to make more money. But rather than allowing industrialised factories as the means to increase the UK farmers' profits, the UK government should support and incentivise other strategies. There seem to be two strategies available: getting more people to buy British pork and tapping into the growing market for high welfare, organic food. Possibly surprising is that currently most pig meat that is consumed in the UK is imported (UK Agriculture, 2011c). This raises the possibility that more money can be made by UK pig farmers by getting more people to buy British pig meat rather than by cutting costs of production through increased scale. 'Buy local' campaigns appear to have been successful for other products and a more concerted effort in terms of pigs could be made. This may work particularly well after recent scandals where imported meat products contained horse rather than the beef that was listed. Eating more British pigs does mean more pigs have to be farmed, but again does not need to and should not take place in an industrialised way. Not only would farmers benefit from an increased market share, but an increased number of small-scale farms would also provide further employment opportunities. The mega-farm in Foston for instance would only employ 20 people (MPP, N.D.), whereas multiple smaller farms with the proper level of care to the non-human animals would in all likelihood require more staff than that. The alternative to current practices of several thousand pigs on a farm does not need to be an even bigger more concentrated process; there is precedent for different methods and this leads to the second possible strategy for UK pig farmers.

As mentioned, there is a growing trend for consumers to buy organic products or products with higher welfare standards for the non-human animals such as free range eggs and chickens. This is evident in pig farming as well. Some UK farms do in fact rear their pigs outside and there are multiple examples of small-scale organic farms with high welfare standards. 'Pigs are normally associated with intensive methods of production, where environmental impacts are generally negative. However, extensive systems where hardy, traditional breeds of pig are grazed on semi-natural vegetation at very low stocking rates can have benefits, but this is not suited to economic mainstream production' (Defra, 2008: 73). As Ruhl (2001: 331) states, 'increased environmental (welfare) regulation may further hurt the economics of farming, but profit cannot be our only concern when developing environmental regulation' of farming non-human animals. There is the possibility with the increasing consumption of organic and free range products that in fact adopting more small-scale farming as proposed would also benefit farmers. A bigger industry would employ more people, which as mentioned is beneficial to people and communities. Such extensive systems then should be encouraged through government programmes or grants. Additionally, the notion of 'mainstream' production being an industrialised one focused on profit needs to be challenged through public awareness campaigns and changes to policy. Raising traditional or heritage breeds of pigs in a more natural setting has numerous benefits. A more natural diet increases the health of the pigs and circumvents the need for antibiotics and medicines that is required in intensive farming methods. It also eliminates dangerous slurry ponds and enclosed ammonia-filled barns. The surrounding environment is healthy and supports wildlife as well as people.

To undertake these strategies and improve the lives of pigs on farms, there will need to be more small-scale, high welfare farms and as indicated costs of such farms would be higher and likely require more labour. Neither of these though should be reasons to abandon such a project. As alluded to this is where the government can play a key role in bringing about change. Higher standards of welfare need to be engrained in policy for the protection of non-human animals, the environment and people. The Animal Welfare Act 2006 and the

Welfare of Farmed Animals (England) Regulations 2007 provide a decent framework by incorporating the five freedoms, but all farmers must be aware of these guidelines. This means that Regulation 10 needs to be reinstated requiring workers to be made knowledgeable about non-human animal welfare. Additionally, the government is responsible for ensuring that all farms meet the guidelines. This means more robust and frequent inspections as well as more prosecutions and fines to make clear that violations of non-human animal welfare are serious and will be punished.

Financially, the government can also aid in making the needed change to high welfare farms. Grants or incentives programmes could be created to help larger farms transition to a smaller scale as well as help new farms get established. This will help to achieve both strategies of reducing the amount of imported pork bought by having more British pork available and tap into the market for organic high welfare products. This needs to be coordinated with a concentrated public awareness campaign as to the multiple benefits to people, pigs and the environment of eating local well taken care of non-human animals. The UK Government can make this happen by eliminating industrialised farms and instituting economic incentives to change the market and ensure that buying British does not just result in domestic intensified methods, but truly small-scale, high welfare endeavours.

The UK Government and the general population are aware that there are 'public health and environmental risks' associated with industrialised pig and other non-human animal farming (Ponette-Gonzalez and Fry, 2010: 1107). Furthermore, four out of five citizens of the European Union in a survey in 2005 believe that we have a duty to protect animal welfare regardless of the economic costs (European Commission 2005). It is no longer acceptable that abuse outweighs profits (Shortall, 2007). With such sentiment, it is time to stop our disengagement with the abuses in non-human animal farming (Mitchell, 2011). Though some of these practices are legal, they are still harmful and as argued by the environmental justice perspective need to be stopped and that may mean criminalisation of some production methods, such as industrialised farming. The UK Government can lead the way by prohibiting industrialised factory farming and implementing programmes to increase the humanity in farming.

Conclusion:

The main focus of this paper has been on non-human animal abuse and environmental degradation in pig farming from a green criminological approach, namely environmental justice. The evidence of abuse, neglect, and unhealthy living conditions in current factory farming is enough to warrant restriction by the UK Government of further industrialised pig and non-human animal farming. It also highlighted the additional concerns for both environmental and human health. Such concentrated animal feeding operations are noisy, smelly, and have significant pollution implications. Pig excrement is typically collected in supposedly leak-proof ponds in slurry or waste lagoons. A brief search into this practice though shows frequent leakage that contaminates the ground water and other water sources. Alternatively, the slurry pond is emptied by diluting with large amounts of fresh water and then spraying the excrement on to agricultural fields. While manure can be a useful fertiliser, the zinc levels of such concentrated amounts of faeces make this practice toxic. The UK Government needs to be highly wary of claims that this practice can be guaranteed to be safe. It should more stringently enforce the welfare standards already within the legislation and should aid farmers in becoming smaller-scale and high welfare farms.

Human and non-human animal welfare need not be an either or; an all or nothing. If we are to continue with non-human animal consumption, which within criminology and other disciplines is a subject of debate, we as a people and the Government have an obligation to the environment to do so in ways that do not pollute or degrade the planet and we have an obligation that outweighs economic or profit motivations to treat non-human animals as humanely and compassionately as possible. As argued by environmental justice, there is also the necessity to ensure that environmental degradation is not forced upon those most marginalised in society. Industrial pig farming prevents all of these obligations from being realised and should then not be allowed to expand or even continue.

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The Dirty South: Exploratory Research into Game Warden Fatalities in the United States

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Abstract:

This research seeks to understand what factors better explain United States game warden fatalities. The data originated from the Officer Down Memorial Page website. From 1886–2012, there were 265, game warden fatalities. These incidents were analyzed based on whether they were felonious in nature, on the season of the year, the region of the United States, the activity at the time of death, and the decade when the death occurred. The results indicated that felonious fatalities were most likely to transpire in the fall, in the Southern region, while the game warden was engaged in a fish and wildlife job related duty, and that these fatalities are less prevalent now than in the past. With almost no empirical research on this important topic, additional research is needed before more definitive conclusions can be proffered.

Key Words: law enforcement, officer fatalities, game wardens, hunting and fishing

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Introduction

The literature on natural resource law enforcement officers in the United States, also known as game wardens and conservation officers, is small, but growing. This literature has described the role of game wardens (Shelley and Crow, 2009; Walker and Bryant, 1985); the changing officer roles (Eliason, 2007; Patten, 2010), the changing focus of the agencies (Eliason, 2007; Sherblom, Keranen, and Withers, 2002), officer discretion (Carter, 2006), why people poach and officers' responses (Eliason, 2008; Forsyth and Forsyth, 2009), the use of force (Carter, 2006; Patten 2012; Patten and Caudill, 2012), and the dangers of the job (Eliason 2011; Forsyth and Forsyth, 2009). Increasingly, researchers have revealed an increase in "urban" crimes (drug manufacturing and personal violence) in outdoor recreational areas where game wardens are likely to patrol (Chavez and Tynon, 2000; Pendleton, 1998; 2000). The current literature, however, is almost devoid of any research related to on duty game warden fatalities.

As a recent example of the escalating urban violence, in early February 2013, Christopher Dorner went on a killing spree in southern California and fled into the mountains (Lloyd *et al.*, 2013). After a statewide manhunt lasted several days, Dorner was spotted by numerous California Department of Fish and Wildlife Game Wardens in a remote part of southeast California (Cart and Stevens, 2013). Dorner and the game wardens exchanged gunfire and a couple of days later, after the standoff with law enforcement officials began, Dorner was found dead in a burned out cabin (Lloyd *et al.*, 2013).

After the Dorner incident was completed, a blog posting from *Outdoor Life* quoted various game wardens from around the United States who thought it was predictable that game wardens would play a role in Dorner's capture because of their familiarity with the rugged landscape (Hansen, 2013). Perhaps ironically, an article from the *LA Times* related its "surprise" that game wardens played a role in the Dorner affair (Cart and Stevens, 2013). The *LA Times* article clearly infers that game wardens catch poachers, not armed killers of people. The different views expressed in these articles emphasize the lack of understanding pertaining to game warden duties and the rare, but realistic, risks faced by these officers.

Although substantial scholarship has focused on traditional police duty-related deaths (Batton and Wilson, 2006; Kaminski, 2008; Kaminski and Marvell, 2002; Kent, 2010), understanding the nature of game warden duty-related fatalities remains under-developed. This research expands and contextualizes Eliason's (2011) study on game warden deaths and provides a more systematic understanding of the felonious deaths of American game wardens.

Literature Review

Recent scholarship has noted a shift in game warden duties from natural resource preservation to law enforcement generalists over the last 20 years (Forsyth, 1994; Shelley and Crow, 2009; Sherblom *et al.* 2002). Instead of being particularly focused on fish and wildlife violations and catching poachers, game wardens have become responsible for a variety of traditional law enforcement functions. Examples of these officer activities include investigating drug crimes, serving warrants, and participating in searches for wanted persons.

Dangers Faced by Game Wardens

Game wardens are subject to both environmental and human caused dangers in the line of duty. These dangers include everything from drowning to gunfire. Through anecdotes and research, it is understood that in an urban or suburban environment, traditional law enforcement officers typically wait less than five minutes for backup assistance (Chelst, 1981). Game wardens, however, often work alone in isolated areas, sometimes hours from backup, which exacerbates potentially dangerous encounters (Carter, 2006; Eliason 2006; 2011; Forsyth, 1993).

Similarly, those isolated patrol areas are typically fraught with dangerous geography (Carter, 2006; Forsyth and Forsyth, 2009) and extreme weather conditions (Eliason, 2006; 2011). Given these environmental factors, game wardens are trained to operate various all-terrain vehicles raising the likelihood of equipment malfunction (Eliason, 2006; 2011). The remote rugged environments, and the increased reliance on all-terrain vehicles, suggest multiple intensifying factors of the dangers faced by game wardens.

One obvious human caused danger associated with game warden duties is the frequency of encounters with hunters and anglers who are armed with knives, handguns, shotguns, and rifles (Eliason, 2006; 2011; Forsyth and Forsyth, 2009). Much of the literature discussing poachers emphasizes the inherent peril they create for game wardens (Forsyth, 1993). Most poachers, however, are not otherwise violent criminals, and are largely members of general society that rely on techniques of neutralization to rationalize their illegal behaviors (Filteau 2012).

The sparse literature studying assaults against game wardens has revealed these instances to be less common than one might think. Carter (2006) and Eliason (2006; 2011) found assaults against state-level game wardens to be infrequent. Carter (2006) demonstrated only 24 assaults, or six per year, against game wardens in Virginia. Similarly, Eliason (2006) found infrequent assaults against Kentucky game wardens. While game wardens are often in contact with these armed, and sometimes violent individuals, assaults against game wardens have been demonstrated to be uncommon (Carter, 2006; Eliason, 2006, 2011).

Game warden use of force is also uncommon. From 1998–1999, Carter (2006) reported 50 separate use of force incidents for Virginia game wardens. From 2002–2009, Florida game wardens reported 241 use of force incidents, with just over one-third (37 percent) listing “verbal commands” as the use of force application (Patten, 2012). Although contemporary studies of violence against and use of force by game wardens have suggested rare occurrences, understanding the nature of game warden fatalities remains important.

Game Warden Deaths:

While the perceived dangers associated with game wardens are legitimate, most deaths are not purposeful or felonious (Eliason, 2011). The Uniform Crime Report, compiled by the Federal Bureau of Investigation (FBI), distinguishes between “accidental” and “felonious” police officer deaths. Accidental deaths are specifically void of purposeful and criminal action, including incidents, such as vehicle crashes and accidental shootings. Felonious deaths are the result of a criminal offense, usually involving some type of weapon, e.g., shootings, stabbings, or some type of purposeful action by a human being that results in an officer’s death (Quinet, Bordua, and Lassiter, 1997). Eliason (2011) found of the 253

reported game warden deaths from 1886 to 2010; 91 (36 percent) were caused by purposeful gunfire. The majority of deaths, however, were due to environmental factors (e.g. 40 or 16 percent from drowning or freezing) or accidents (e.g. 68 incidents or 27 percent from plane or automobile crashes). If all causes of game warden fatalities were sorted into two categories, accidental or felonious, the accidental deaths (149 or 53 percent) would exceed the felonious ones (104 or 41 percent). For research purposes, game wardens are frequently compared to traditional law enforcement officers due to the similar job roles. In attempting to gain a greater understanding of why game wardens might be feloniously killed, it is natural to search this literature for potential reasons.

Traditional Law Enforcement Officer Deaths

Many studies have focused on traditional law enforcement officer deaths (Batton and Wilson, 2006; Kaminski and Marvell, 2002; Uchida and King, 2002; Wilbanks, 1994). It is commonly accepted that traditional policing is fraught with assaults and murders perpetrated against police officers. Historical trends related to felonious deaths illustrate the inherent danger in policing, with incidents ranging from a low of about 15 deaths per 100,000 officers in 1960, peaking at 38 deaths per 100,000 officers in 1971, and steadily declining to 10 deaths per 100,000 in 1992 (Quinet *et al.* 1997). In a study of New York police officers from 1990–1999, Kyriacou *et al.* (2006) found of the 585 total officer deaths, 331 (57 percent) were intentional, 243 (42 percent) were unintentional, and 11 (2 percent) were unspecified (the percentages do not total 100 due to rounding errors). For quite some time, scholars have been trying to identify variables that might explain or predict police homicides.

In studying police homicides, researchers have operationalized different variables in attempts to understand the fatalities, including income inequality, jurisdictional minority proportion, and population density (Chamlin, 1989; Kaminski, 2004; 2008; Kent, 2010; Peterson and Bailey, 1988). For example, Kaminski (2008) reported police officers were more likely to be murdered in economically depressed counties and in counties with larger percentages of Black residents aged 25 to 34. Additionally, Kent (2010) found racial income inequality and the size of the jurisdiction's Black population also influenced police homicides. In relation to game wardens, many of the variables used to attempt to understand police officer fatalities are less germane, and in some instances, impractical. So, in attempting to understand factors that might explain game warden fatalities, it is important to note that utilizing the standard explanations of police homicides may be less fruitful than expected.

Game wardens typically cover large, very rural areas with sparse residential populations, therefore, the economics and racial demographics of the jurisdiction are less likely to be relevant when game wardens are murdered. Also, in the United States, hunting and fishing are largely activities pursued by Whites. For instance, according to the United States Fish and Wildlife Service National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (FWSNS) (2011), 94 percent of all hunters and 86 of all anglers were White and these numbers have remained stable over the past 20 years (FWSNS, 1991). As previously demonstrated, using police homicide metrics is not suitable to understanding felonious game warden deaths. Given these distinctions, scholars have yet to attend to understanding game warden fatalities.

This research builds on Eliason's (2011) game warden mortality study, which is to date, the only study of game warden fatalities. Although Eliason was able to capture the various manners in which game wardens were killed from 1886–2009, his research included

little analysis which provides greater context or explanatory factors surrounding the fatalities. This research adds to the literature four new variables to understand game warden deaths, specifically the seasonality, region, game warden activity, and whether felonious deaths are increasing.

Methods

The data originated from the Officer Down Memorial Page (ODMP) website.¹ The mission statement of ODMP states in part, 'The ... ODMP is a non-profit organization dedicated to honoring America's fallen law enforcement heroes. More than 20,000 officers have made the ultimate sacrifice in the United States and it is with great honor that the ODMP pays a lasting tribute to each of these officers by preserving their memories within its pages' (ODMP 2013). In addition to using self-reported data, the ODMP has received assistance from the National Law Enforcement Officer's Memorial Fund, Inc., and the U.S. Department of Justice, Bureau of Justice Assistance in collecting data related to law enforcement officers' deaths.

The ODMP categorizes every law enforcement officer death by agency, and within each agency there is a brief description of the circumstances surrounding the officers' deaths. Each state's fish and wildlife agency was searched (in some cases, due to renaming and the combining of agencies, there was more than one agency searched) for game warden deaths. Federal agencies also responsible for enforcing fish and wildlife regulations and laws were also included in the data collection.

For each game warden fatality from 1886 through August 2012, the researchers collected the date (month and year), the state where the fatality occurred, the activity at the time of death (fish and wildlife related or something else), and the nature of the death. The nature of death focused on whether the fatality was felonious in nature (caused by another person/created out of a circumstances caused by another person, e.g. died during a car pursuit) or accidental in nature (e.g. plane accident, drowning, and others).²

The deaths were coded by: decade (1901 to 1910, 1911 to 1920, and so on, except every death prior to 1901 was put in its own category and all deaths from 2001 to 2012 was also a distinct category), by season of the year (January to March was coded as winter, April to June as spring, July to September as summer, and October to December as fall), the states were grouped into five regions based on regions created by the United States Fish and Wildlife Service (USFWS),³ whether the game warden was engaged in a fish and wildlife related activity at the time of death, and whether the death was felonious or accidental. The season of the year, the region of the United States, and the activity at the time of death were then analyzed using chi-square, and in the case of the decade of the death, a magnitude index was employed to ascertain what, if anything, could provide greater context in explaining felonious, game warden fatalities.

Results

From 1886 to August 2012, there were 265, on duty, game warden deaths (see Table 1). Of the deaths, 113 (43 percent) were felonious, 160 (60 percent) occurred while the game warden participated in a fish and wildlife related activity, 112 (42 percent) happened in the Southern region and 63 (24 percent) transpired in the Midwest region, 96 (36 percent)

occurred during the fall and 68 (26 percent) happened during the summer, and 95 (36 percent) happened during the 1950s through the 1970s (see Table 2).

Table 1 – Number of Game Warden Fatalities from 1886 to August 2012

Fatality		
	N	%
Felonious	112	42
Accidental	153	58
Total	265	100

Table 2 – Game Warden Fatalities by Decade

Decade	Felonious		Accidental		Total	
	N	%	N	%	N	%
1886 – 1900	3	75	1	25	4	100
1901 – 1910	4	67	2	33	6	100
1911 – 1920	16	89	2	11	18	100
1921 – 1930	21	60	14	40	35	100
1931 – 1940	12	52	11	48	23	100
1941 – 1950	13	59	9	41	22	100
1951 –	5	18	23	82	28	100

1960						
1961 – 1970	7	22	25	78	32	100
1971 – 1980	13	37	22	63	35	100
1981 – 1990	12	46	14	54	26	100
1991 – 2000	1	9	10	91	11	100
2001 – 2012	5	20	20	80	25	100

As noted by Eliason (2011), game wardens were killed on duty in a variety of ways. The two most pronounced causes of game warden fatalities were gunfire and vehicle accidents. Gunfire was the most prominent cause of death totaling 110 fatalities (42 percent), although four were accidental. An aircraft, auto, or boat accident accounted for the most accidental deaths with 79 (30 percent).

When the game warden fatalities occurred was relatively consistent across seasons of the year (see Table 3). While the fall and summer accounted for the highest number of deaths (164 deaths; 62 percent), the percentage of felonious deaths per season was reasonably stable, with one notable exception. Fall, summer, and winter experienced felonious deaths at rates of 49 percent, 44 percent, and 47 percent, respectively ($\chi^2 = 7.7$, $df = 3$, $p < .1$). Spring, however, witnessed only 27 percent felonious deaths. Overall, the fall accounted for 42 percent of all felonious fatalities.

Table 3 – Number of Game Warden Fatalities by Season

Season	Felonious		Accidental		Total	
	N	%	N	%	N	%
Winter (January - March)	21	47	24	53	45	100
Spring (April - June)	15	27	41	73	56	100
Summer (July - September)	30	44	38	56	68	100

Fall (October - December)	46	48	50	52	96	100
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$\chi^2 = 7.7; df = 3; p < .1$

The region of the United States where the fatality occurred was subject to wide variance (see Table 4). Part of the variance of this finding is due to the method by which the USFWS creates and delineates regions. For example, the South region contains 17 states, while the Mountain region has seven and the Pacific region only has six.⁴ As expected, the South region experienced the highest number of game warden deaths with 112 and the Pacific region had the least at 25. What is interesting to note, however, is the disproportionate nature of felonious deaths in each region. Almost two-thirds of the fatalities in the Pacific region were felonious. Both the South and Northeast had 44 percent felonious deaths, followed by the Mountain with 39 percent and the Midwest with 32 percent, respectively ($\chi^2 = 8.1, df = 4, p < .1$).

Table 4 – Number of Game Warden Fatalities by Region

Season	Felonious		Accidental		Total	
	N	%	N	%	N	%
Northeast	17	44	22	56	39	100
South	49	44	63	56	112	100
Midwest	20	32	43	68	63	100
Mountain	10	39	16	62	26	100
Pacific	16	64	9	36	25	100

$\chi^2 = 8.1, df = 4, p < .1$

As mentioned previously, game wardens are frequently called to engage in various types of law enforcement duties outside the direct purview of fish and wildlife enforcement (Eliason, 2007; Falcone, 2004; Shelley and Crow, 2009; Sherblom, Keranen, and Withers, 2002) and many of these activities are related to violent or potentially dangerous situations. These findings run contradictory to this scholarship (see Table 5). Of the 265 game warden fatalities, 160 occurred (60 percent) while they were engaged in a fish and wildlife activity and of these 160 fatalities, 78 (49 percent) were felonious ($\chi^2 = 7.5, df = 1, p < .01$). Of the 105 deaths that occurred when game wardens were not involved in fish and wildlife activity (e.g., performing a traffic stop for a speeding violation, serving as backup for a sheriff's office, and others), only 34 (32 percent) were felonious in nature.

Table 5 – Number of Game Warden Fatalities by Activity

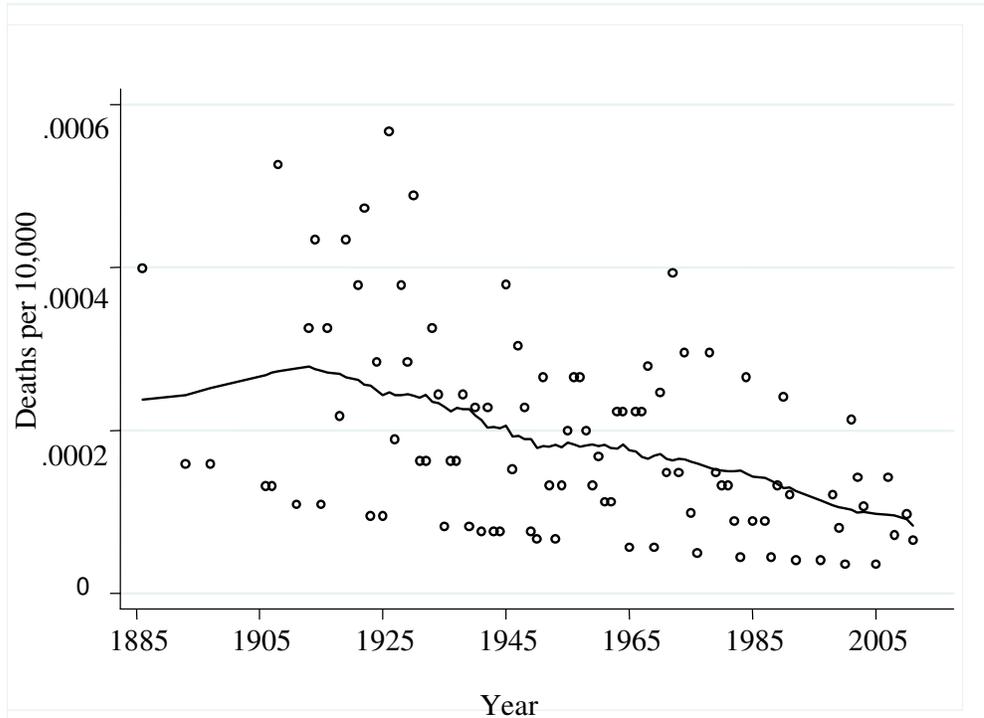
Game Warden Activity	Felonious		Accidental		Total	
	N	%	N	%	N	%
Fish and Game Related	78	49	82	51	160	100
Non Fish and Game Related	34	32*	71	67	105	100

* Rounding error

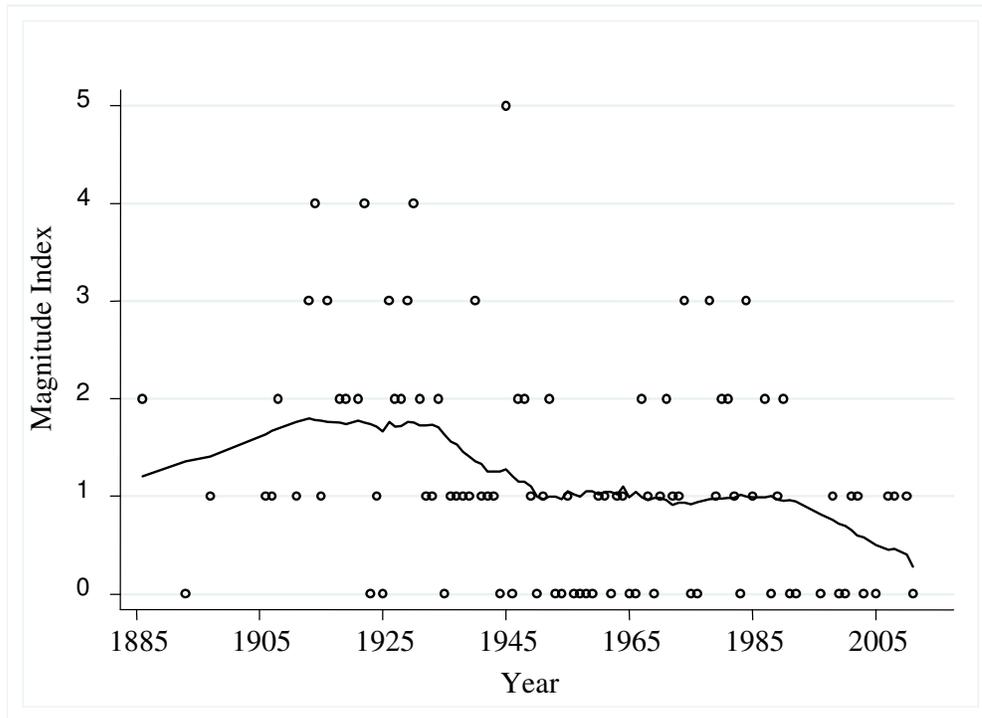
$$\chi^2 = 7.5, df = 1, p < .01$$

Much like traditional police officers, this research demonstrates the decreasing nature of felonious game warden fatality rates (see Graph 1). Graph 1 illustrates the felonious game warden fatality rate by 10,000 population of the United States. There is a slight peak towards the turn of the 20th century, with a steady decline into the beginning of the 21st century. Graph 2 shows the magnitude index of felonious, game warden deaths from 1886–2012. The magnitude index reflects the yearly death totals and felonious death index (magnitude index = yearly death total*felonious death index). Similar to Graph 1, there is a higher magnitude index that extends into the early 1930s, coupled with a steady rate for almost 40 years before we finally see a decline beginning in the early 1990s, which extends to the present time.

Graph 1 – Game Warden Fatalities over Time



Graph 2 – Game Warden Fatalities by Magnitude Index



DISCUSSION

Past research has produced mixed results related to use of force by and against game wardens and the season of the year (Carter, 2006; Patten and Caudill, 2012). While Carter (2006) documented a seasonal balance in use of force by and against Virginia game wardens, Patten and Caudill (2012) noted Florida game wardens used force more in the summer than at any other time, although the discrepancies were small compared to the other seasons. The seasonality of game warden deaths also produced mixed results. The fall and summer seasons experienced the greatest percentage of game warden deaths. Considering fall and summer incorporate the largest hunting and fishing seasons, it is predictable that these two times would account for almost 70 percent of felonious deaths.

When trying to understand game warden fatalities by region, it is important to know how many hunters and anglers there are per region. According to the FWSNS (2011), since 1960, the South region has had the largest total number of hunters and anglers with an average of 14,200,000 participating in these two activities each year. Since this region contains the most states, it is unsurprising the South has the most hunters and anglers, and accordingly, the largest number of game warden deaths. As noted previously, the Pacific region had the highest percentage of felonious deaths at 64 percent. Since 1960, the Pacific has had the second fewest number of hunters and anglers (the Mountain has the fewest). Of the 16, felonious deaths in the Pacific region, 13 were gunfire related, 11 were related to a fish and game activity, and 12 of the 13 occurred prior to the 1980s with seven transpiring during the 1910s.

From 1886 to August 2012, a time period of almost 125 years, there have been 265 on duty fatalities (a rate of about 2 deaths per year). Of these 265 deaths, 112 (43 percent) have been felonious (a rate of about .9 deaths per year). This study's findings are similar to Quinet

et al. (1997) and Kyriacou *et al.*'s (2006) studies of traditional police officer deaths, revealing slightly less than 50 percent of the deaths were felonious in nature. Additionally, this study's findings are consistent with the general trend of law enforcement homicides, which show a decline from the 1970s through the late 1990s (Batton and Wilson, 2006). The decrease in fatalities of all law enforcement personnel is also likely related to the advances in Kevlar vests. Another potential reason for these low fatality rates is game wardens frequently interact with docile sportspersons out enjoying recreational opportunities.

Furthermore, game wardens across the United States are increasingly required to attend traditional law enforcement academies. The researchers' records note 42 states require their game wardens to attend traditional law enforcement academies. This mandated training is a relatively new obligation for many states as well. For example, the Washington Department of Fish and Wildlife started mandating their game wardens attend the Washington Basic Law Enforcement Academy in 1988 (Patten, 2010). At these academies, game wardens receive extensive training to manage and adapt in evolving and hazardous situations. These game wardens likely receive training related to conflict management, de-escalation tactics, and disarming people which directly translates to poachers and others.

While game warden fatalities are a rare occurrence, it is interesting to note when they are feloniously killed, they are likely engaged in a fish and wildlife law enforcement related action. This finding is unsurprising as game wardens, by definition, are tasked with protection of fish and wildlife, so they spend a majority of their time enforcing these laws. Scholars have found, however, there is an increase in urban and violent crime creeping into wilderness areas, which are locations patrolled by game wardens, but this shift in professional tasks has not correlated to an increase in felonious fatalities (Eliason, 2007; Falcone, 2004; Shelley and Crow, 2009; Sherblom, Keranen, and Withers, 2002).

Research has demonstrated violence towards game wardens to be uncommon, but due to their working environments, tense encounters can frequently find the game wardens outnumbered and outgunned (Eliason, 2006; 2011; Forsyth and Forsyth, 2009). Eliason (2011) quoted a game warden that clearly elucidates how these contacts can become violent; game wardens are "faced with more armed and potentially armed individuals than any other law enforcement officer. Remote areas [are] patrolled. [We have] limited backup, or backup is often hours away ... Wildlife offenses now carry stiffer penalties which cause certain individuals to become more likely violent" (p. 412). While game wardens may be responding to more incidents related to urban and violent crime, the majority of their duties and interactions still place them in contact with relatively peaceful hunters and anglers.

Conclusion

This research adds to Eliason's (2011) descriptive study on game warden fatalities by including the elements of seasonality, region, activity, and the longitudinal exploration of felonious deaths. While Eliason (2011) accurately described many of the dangers resulting in game warden fatalities, there was very little analysis that could be used to help form policy or training discussions. This research provides depth and analysis for United States fish and wildlife agencies to better explain, and thus prepare, their front line personnel for the mortal dangers they might face.

Recent scholarship has noted game wardens face various types of dangerous situations, but rarely do these encounters result in any type of violence (Carter, 2006; Eliason,

2006; 2011; Forsyth and Forsyth, 2009). This study underscores the irregularity of game warden fatalities (about two deaths per year and less than one felonious per year). These findings are also consistent with felonious deaths of traditional police officers, which note a downward trend (Kyriacou *et al.*, 2006; Quinet *et al.*, 1997).

While the number of felonious deaths might be low, this research can be used for policy and training purposes. Although recent research has shown game wardens are increasingly involved in more “general” law enforcement activities (Eliason, 2007; Falcone, 2004; Shelley and Crow, 2009; Sherblom, Keranen, and Withers, 2002), 70 percent of felonious deaths were experienced during fish and wildlife enforcement activities. Additionally, 68 percent of felonious deaths occurred during summer and fall, the two most popular fishing and hunting seasons. While game wardens naturally understand the dangers related to interactions during peak fishing and hunting seasons, it should be emphasized the shift to a more “generalized” police role has not corresponded to a rise in felonious deaths. While popular, American television shows like *Wild Justice* might highlight game wardens battling large marijuana grow operations or drug smugglers, training should accentuate the dangers associated with game wardens’ primary job responsibilities: preserving and conserving fish and wildlife.

Regionally, the South has the greatest number of hunters and anglers (FWSNS, 2011), so the greater number of felonious deaths is understandable. Since the 1960s, both the Pacific and the Northeast regions have had substantially lower levels of participation in hunting and fishing, so it might be assumed these two regions would have the lowest levels of felonious deaths. As a percent of felonious fatalities, however, the Pacific has more than the South and the Northeast has the same percentage of felonious deaths as the South. This study shows game wardens in regions where hunting and fishing are less popular appear to be more vulnerable to felonious deaths. Training programs might encourage game wardens in these regions to be more vigilant or have game wardens ride as pairs during prime hunting and fishing seasons. Future research on game wardens might consider greater analysis of felonious deaths between regions to explain this finding.

This research does have some notable limitations. This study relies on unofficial reporting, which has a stated bias towards honoring law enforcement officers that have died in the line of duty. To the best of the authors’ knowledge, there is no other data warehouse that compiles information related to all game warden fatalities. When the authors contacted individual agencies in an attempt to gather data pertaining to game warden deaths, there was seldom an individual able to assist in answering such detailed questions, especially regarding fatalities that were 50 to 100 years old.

Quite often, while researching each game warden’s fatality on the ODMP website, useful information was unavailable, including, but not limited to: demographic information about the game warden, the length of service of the game warden, and demographic information about the suspect(s). This type of information would allow researchers to create more descriptive and useful recommendations for policy and training purposes. Future research in this area should try and use this outstanding data to develop more encompassing conclusions.

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Endnotes:

1. <http://www.odmp.org/>
2. All deaths related to natural causes (e.g. heart attacks) were eliminated from the analysis because the heart attack was likely related to personal history and/or lifestyle choices that are not directly related to a career as a game warden.
3. The USFWS separates the nation into nine different regions: New England, Middle Atlantic, South Atlantic, East South Central, West South Central, East North Central, West North Central, Mountain, and Pacific. So many small regions made analysis difficult, so the regions were collapsed into five, larger regions based on geographical and cultural similarity: New England = New England and the Middle Atlantic; South = South Atlantic, East South Central, and the West South Central; Midwest = East North Central and the West North Central; the Mountain and the Pacific remain as classified by the USFWS.
4. States of the New England region are: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, and New Jersey. States of the South region are: Delaware, Washington, D.C., Maryland, West Virginia, Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Mississippi, Alabama, Texas, Oklahoma, Arkansas, and Louisiana. States of the Midwest region are: North Dakota, South Dakota, Nebraska, Kansas, Wisconsin, Iowa, Missouri, Minnesota, Illinois, Michigan, Indiana, and Ohio. States of the Mountain region are: Montana, Idaho, Wyoming, Utah, Colorado, Arizona, and New Mexico. States of the Pacific region are: Washington, Oregon, Nevada, California, Hawaii, and Alaska.

Insider Knowledge Environmental criminals' perceptions on crime, corruption and CITES

Charlotte Davies⁶

Abstract:

Despite wide-ranging negative impacts, environmental crime is often treated as a low-priority crime by Governments, which consequently impacts upon effective criminal justice response. Historically, lack of understanding of the serious and organised nature of some forms of environmental crime, coupled with underinvestment in resources, has resulted in a lack of consistent implementation of effective prevention and disruption tactics. Burgeoning trafficking is unmatched by prosecutions and convictions of major criminals, and response is frequently species or commodity-focused without deeper understanding of the sophisticated criminal dynamics driving the trade.

Data on offender perceptions - on which enforcement activities and policies are effective, and which market trends and enforcement gaps allow them to continue in business - may be applied to redress this balance to more effectively understand and combat environmental crime. This paper argues how this information is pertinent to all stakeholders, whether they are law enforcement and crime prevention practitioners, policy makers, academics, civil society or media.

The paper further argues that offender perceptions can serve as a valuable indicator of the impacts of international trade decisions regarding flora and fauna, such as legal "one off" ivory sales – a consideration historically missing from trade decisions.

Key Words: NGOs, environmental crime investigations, offender attitudes, criminality

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Introduction

Environmental crimes include illegal wildlife trade, the illegal trade in ozone-depleting substances, dumping and illegal transport of hazardous waste, illegal unregulated and unreported fishing and illegal logging and trade in timber (EIA, 2008). Rob White identifies that environmental harms often 'transcend the normal boundaries of jurisdiction, geography and social divide' (2012: 15). Yet, despite wide-ranging negative impacts, environmental crimes are often treated as low-priority by Governments, which consequently impacts upon effective criminal justice responses (Nurse, 2003; 2011). Historically, a lack of assigned resources, understanding of the serious and organised nature of some forms of environmental crime, and the dynamics of the criminality driving the trade, has resulted in a lack of coherent implementation of prevention and disruption tactics. This is evidenced through burgeoning trafficking unmatched by effective prosecutions and convictions, particularly of major criminals (Global Initiative, 2013) and a failure to effectively integrate environmental crime into criminal justice policy (Nurse, 2003; 2011, Wellsmith 2011).

Criminal justice responses to environmental crime need to be elevated through higher prioritisation of environmental crime and increased assignation of resources. Currently the response is largely left in the hands of environment rather than justice departments and techniques used in mainstream criminal justice are often under-utilised (Nurse, 2012; Wellsmith, 2011). Operationally, improved detection and disruption is achievable through application of targeted and advanced enforcement approaches, deployed alongside prevention measures. Strengthening of national laws and domestic implementation of international conventions such as the UN Convention on International Trade in Endangered Species (CITES) will harmonise responses to what is recognised as a growing threat (INTERPOL, 2013).

This paper argues that environmental criminals themselves currently offer a large and significantly unexploited source of information on motivation, methods and potential deterrents. They also give insights into facilitators of crime, such as corruption, weak or inadequately enforced legislation, and parallel legal domestic markets into which illegal goods may be laundered. Currently however, the motivations and perceptions of these criminals are not adequately being taken into account by all stakeholders, and further criminal justice policy treats offenders homogenously, ignoring the evidence of their different motivations and perspectives (Nurse, 2011; South and Wyatt, 2011). These are symptoms of the situation where environmental crime is not fully understood and effectively addressed, and likewise compounding barriers to change.

This paper posits that environmental criminals' knowledge may be applied to greater understand and more effectively combat environmental crime and contribute to redressing this balance. Engaging environmental criminals enables and enriches interventions aimed at the detection, disruption and prevention of crime. Doing so is possible through a variety of means by a variety of practitioners: whether through intelligence-led investigations using a suite of more advanced investigation methods or through designing deterrents which demotivate offenders from pursuing crime in the first place. A range of applications are provided as examples.

This paper then focuses upon, but is not limited to, environmental crime in the form of trade in endangered and threatened species including Asian big cats and African elephants, internationally subject to regulation through CITES. While difficult to monitor, wildlife

trafficking is thought to be the second or third most valuable illicit commerce in the world after drugs and weapons with estimates of its value ranging between \$10 and \$20 billion annually (South and Wyatt, 2011). Its precise value is contested and doesn't take into account the resultant impact on livelihoods through, for example, lost tourism revenues from poaching or the negative impacts on local communities, biodiversity and climate. It is also an area where the criminality involved encompasses a range of behaviours and motivations (Nurse 2011, 2013), although these are not the focus of this paper, thus the perceptions of participants in the trade provide valuable data on the nature of offending.

Following the 1989 international ban on ivory trade, China and Japan were recipients of ivory in CITES-approved, legal international sales (1999 to Japan, and 2008 to Japan and China). Case study analysis of interactions between ivory traders and international decision-making processes, form the basis of this paper's examination which places the perceptions of ivory traders in China alongside pre and post 2008 ivory sale CITES processes, where traders expressed expectations and reactions to international legal trade in ivory. Unless otherwise stated, the presented statements from traders have been generated from direct engagement over the course of journalistic investigations in both source and consuming countries, anonymised and supported by a reference number shown in the text (EIA, 2000-2012).

Criminal perceptions of environmental crime

It is established practice to gather information about perceptions of 'traditional' crimes such as robbery or burglary. In the UK, for example, police and local authorities invite communities to express their perceptions of crime, including fear of crime, through consultations, surveys or questionnaires. Questionnaires such as these have the advantage of highlighting what is perceived by the victim as criminal behaviour, such as types of anti-social behaviour, although in reality this behaviour might not actually be an offence under existing criminal law.

Surveys such as these and the US National Crime Victimization Survey may also capture unreported crime, so the results may indicate the presence of crimes that have not been officially reported to law enforcement (FBI, 2013).

Surveys can be subject to constraints, including: only accessing and capturing the views of certain sections of a population; embedded assumptions expressed in question format; the subjective response of the respondents based upon a host of factors, including personal experience; and the fact that different types of offences will be reported in different means, so 'unreported crime' captured in a survey may be skewed towards, and therefore representative of, only certain kinds of offences. This point is included to demonstrate the limitations and challenges in constructing these questionnaires, which should be taken into account when designing a way to record perceptions of victims or criminals. See also the Crime Survey for England and Wales (formerly the British Crime Survey which now runs continuously).

A body of literature about public perceptions of crime (including those of victims of crime) assists in the development of policies and crime prevention strategies. Within such research a concentration on victims as opposed to criminals is likely due in part to several factors: e.g. the covert nature of criminal activities in the first place; the moral imperative for attention and action is directed towards assisting victims of crime and the non-criminal community; police and decision-makers are required to be aware of, accountable and reactive to community perceptions of crime and fear of crime; sociological research may tend towards

identifying potentially at-risk and vulnerable groups, such as women, to develop preventative and support solutions; even the existence of culture that may not wish to 'legitimise' criminals by soliciting their views.

For environmental crime, these structures do not exist in formalised, wide-ranging ways. Environmental crime victims are broad, to name a few: species, communities, economies and national and international security. Demand-reduction research and campaigns seek to engage consumers of wildlife products, but this is challenged when the trade is covert, as has occurred for tiger parts and rhino horn, or if Government policy itself stimulates demand through allowing legal domestic trade (Schneider, 2008). Furthermore, local communities affected by poaching and destruction of natural resources may not be surveyed for their perceptions of community-level losses.

If offenders feel scrutinised, whether through the presence of effectual enforcement officers or community monitors, or from 'natural surveillance' where the physical environment makes offenders feel exposed (Newman, 1972), they can be deterred from committing crime. But when that scrutiny is absent, and when there is a lack of legal sanction – such as non-existence of laws or weak enforcement – deterrent-free crime remains a strong and irresistible magnet.

'Driven by perceptions of low risk and high profit, indications have emerged of environmental crime activities attracting the greater interest of organized crime groups' (United Nations Environment Programme, 2013).

UNODC states that these organised crime groups are 'often relying on failures in the criminal justice system' (United Nations Office on Drugs and Crime, 2013) reflecting Situ and Emmons' comment that environmental crime (including corporate based crime) is 'a product of motivation and opportunity conditioned by the quality of law enforcement' (2000, 67).

Trader insights into legal and illegal markets

In 2011, investigations by the non-governmental organisation Environmental Investigation Agency (EIA) into the illegal rosewood trade engaged a major trader who complained that the 'species is finished' and 'there are only about five years left in the trade' (EIA, 2012b). This was quoted in the subsequent proposal to list *Dalbergia cochinchinensis* on CITES Appendix II, submitted by Thailand and Vietnam for the 16th Conference of the Parties (CoP) to CITES (Thailand and Vietnam, 2012) which, with additional evidence, makes the case for why the species should receive international protection.

An analysis of the effect of market speculation on wildlife decline, *Banking on Extinction* (Mason *et al.*, 2012) quotes the following extract from *The Economist* (2002), which describes the perceptions of those trading scarce wildlife:

'Market signals suggest that basking sharks do face a problem. Kuniaki Takahashi, a Japanese shark-fin trader, is so convinced that stocks are collapsing that a few years ago he cornered the market in Norwegian shark fins and stockpiled the result in Japan. He still seems confident that his stockpile will make him a fortune.'

(The Economist, 2002)

Unlike surveys which seek to identify the demographics of wildlife product consumers, traders can give direct information about who is buying what and why.

EIA-Wildlife Protection Society of India (WPSI) investigations across the Tibetan plateau highlighted the use of endangered Asian big cat skins for traditional Tibetan clothing (chupa); but by 2006 this demand had collapsed. Since the massive skins seizure at Sangsang (2003), there does not appear to have been sustained enforcement action in the western part of the country (EIA, 2010a) enabling persistent traders to continue committing crime. Supply continues, simply to a different market – since 2007 primary demand has come from mainland Chinese military and business elites, who desire skins for luxury home décor, taxidermy and non-financial bribes. Bribes are another way corruption lends a hand to crime.

Connections, corruption and collusion: facilitating environmental crime

Corruption, collusion of authorities in crime, and political connections undermines the work of committed officers and often means business as usual for criminals – the most powerful among them rarely apprehended (Global Initiative, 2013; New York Times, 2013; Gray 2012).

The nature of corruption makes it difficult to assess, so Transparency International (2012) takes perceptions of corruption as the best available method noting the following:

‘Corruption generally comprises illegal activities, which mainly come to light only through scandals, investigations or prosecutions. It is thus difficult to assess absolute levels of corruption in countries or territories on the basis of hard empirical data. Possible attempts to do so such as by comparing bribes reported, the number of prosecutions brought or court cases directly linked to corruption cannot be taken as definitive indicators of corruption levels. Rather they show how effective prosecutors, the courts or the media are in investigating and exposing corruption. One reliable method of compiling comparable country data is to capture perceptions of those in a position to offer assessments of public sector corruption in a given country.’

(Transparency International, 2012)

The Elephant Trade Information System (ETIS), used by CITES to record and statistically analyse levels and trends in illegal ivory trade, has previously utilised TI’s perception of corruption as one component (TRAFFIC, 2013).

When criminals speak of environmental crime, corruption as a facilitator is woven into most scenarios they describe. The persistent trader of endangered species quoted below, engaged during NGO investigations in China, has consistently referred to corruption, giving an example here why he need not worry even if his products are seized:

‘Imprisonment – impossible... After they confiscate the items, we’ll find the people inside, pay a bit ... and retrieve the items.’

– Persistent trader T12 of Asian big cat skins in Linxia, China, 2012

Corruption permeates every aspect of environmental crime: permits are obtained illegally, criminals get tip-offs about planned checks and raids, ‘errors’ in evidence-gathering mean unsuccessful prosecutions, and local officials are themselves the buyers and recipients of wildlife products (EIA, 2008; Kugler et al., 2003). Under-resourcing of enforcement

agencies, in terms of salaries, prestige and investment in skills, can compound these issues. In principle corruption is the subject of international cooperation through measures such as the OECD *Convention on Combating Bribery of Foreign Public Officials in International Business Transactions* (the OECD Convention) an international mechanism aimed at combating business corruption. However, while the OECD argues that its Convention is ‘one of the world’s most powerful tools to promote more transparent international business practices’ and ‘sets the highest and toughest standards for fighting bribery in business’ (OECD, 2012: 2), in practice the Convention’s effectiveness is limited. This is particularly the case in transactions that are themselves illegal, in purely domestic transactions and where business transactions take place in areas where enforcers are poorly paid and/or susceptible to inducements as the following quote illustrates.

‘When it comes to smuggling ... they [traffickers] get notice ... some are very close to the people in Customs ... the stuff that has been seized, they buy it back from Customs ... Customs don’t earn much ... so what do they want ... for example, if I were a Customs officer, if you pass by my area and I detain your goods, if I sell it off, it would be my personal gain ... I earn a bit and you earn as well ...’

– Ivory trader T5b in China, 2010

While enforcement is the key to the Convention’s success, Hatchard argues that a mixed picture exists across states regarding prosecution of transnational corruption (2011:148) with critics of CITES noting that its facilitation of trade allows an illegal trade to flourish alongside a legal one (Nurse, 2013). Thus, even if legislation is tightened and enforcement does its job, the ability of criminals to corrupt the judicial process renders ‘deterrents’ such as imprisonment meaningless (Kugler *et al.*, 2003) where offenders know that, in practice, they can buy or intimidate their way out of trouble. This can only demotivate those working hard to ensure a successful prosecution.

‘I went inside [prison] but I came out ... I just have to pay money.’

– Ivory dealer T7 in Zambia, 2010

Yet if authorities investigating criminal activity detect corruption or powerful vested interests, they may be unwilling or discouraged from digging too deeply. Transparent and robust oversight and anti-corruption initiatives can help towards a working environment where honest officers are not demotivated and are able to undertake cases without fear of reprisal. NGOs and journalists who conduct their own investigations into environmental crime and gain first-hand access to environmental criminals who reference corruption can use this information to call for greater transparency and accountability.

Corruption needs to be acknowledged as a key impediment to effectively tackling environmental crime, and one with lasting impacts across the entire criminal justice system. Strategies to combat environmental crime need to both run parallel to and incorporate anti-corruption measures. Either way, what offenders say should be crucial to all those delivering an anti-corruption agenda, as their evidence illustrates the widespread nature of corruption.

Tackling corruption in practice

Arguably, because environmental crime such as trafficking of ivory may be seen as 'victimless', it may be more susceptible to the corrupt involvement of agencies. A consignment of elephant tusks seized in a transit or consuming country is far from the scene of the original poaching incidents yielding the tusks. Legally, ivory may be viewed as a potential commodity following seizure.⁷ This situation differs from one such as a human trafficking case, in which the immediate and human victim may present and immediately discernible. If ivory or illegal timber is considered a commodity in isolation with no immediate context of harm, the possibilities to exploit the consignment – often for financial gain – may be ethically easier to undertake. A variety of corrupt practices may result, such as acceptance of bribes for letting a consignment pass onwards onto the market. Corruption is pernicious, and different working environments provide different challenges to combating corruption: insecure or conflict-affected border areas being some of the most challenging and dangerous (Rademeyer, 2012: 235).

Anti-corruption methods need to incorporate both deterrent and preventative methods (McCormack, 1996: 44) working in tandem. There must be a commitment and active support from political, enforcement (Newham, 2011:6) and judicial leadership to tackling corruption. The status of national or specialist units mandated to enforce environmental crime should be raised (EIA, 2010) and officers provided with a well-resourced working environment. Recruitment procedures for enforcement agencies should have the means to attract passionate, motivated and dedicated candidates, and include thorough background checks; ethics and integrity training should take place regularly and throughout an officer's career (Newburn, 1999: 28-29).

To work effectively, both internal and external specialist anti-corruption units require a strong mandate, capacity, security, requisite skills, ability to act independently, and jurisdiction (Hatchard, 2011). Listed under *reasons why specialised anti-corruption units fail* are: 'Insufficiently independent from interference; Inadequate resources and capacity and security; No incentives to attract the required Investigators; Is not held properly accountable for its performance or the conduct of its members' (Newham, 2011: 10). The units themselves must also be accountable, including having officers of higher ranks and who have been tested for adherence to supervisory responsibilities incorporated into units (Newham, 2011: 14-15).

Corruption exists in many different ways: it may be in process or in financial terms (Newburn, 1999) which means different skills and methods are required to identify and combat the conditions which allow corruption. Newham (2011:16) provides two models for addressing police integrity, being the deterrence model and the opportunity-focused model, the latter 'identifies the *conditions* preset for corruption to flourish'.

Methods for identifying corruption should combine reactive procedures (such as mechanisms for internal and public complaint reporting and response) with proactive methods such as regular development and delivery of multi-faceted anti-corruption strategies which are reviewed for effectiveness, and risk assessments to identify and prioritise areas which are prone to corruption (Newham, 2011). Resources including the *Wildlife and Forest Crime*

⁷ In 2012, the Government of China called on all Parties to CITES to assess the CITES policy and consider the use of legally obtained as well as confiscated ivory (China 2012: 3).

Analytic Toolkit can also assist in identifying technical assistance needs throughout the criminal justice system (United Nations Office on Drugs and Crime, 2012).

Detecting the bosses: How, when and why to engage criminals

In environmental crime, law enforcement and prison services have immediate access to offenders. Information from and about offenders can be captured in both direct and indirect ways, shown below. Yet there are ethical and legislative considerations, both to collecting information from offenders and impacting on specific methods of obtaining data (noted in the following section *Whose perception is it?: Considerations when recording perceptions*).

Direct:

- arrest interviews;
- investigations, including covert methods such as law enforcement officers posing as potential associates; appropriate surveillance including monitoring of communications;
- prison interviews.

Indirect (information known personally to a source):

- human information sources (such as community who live where crimes happen, or covert informants who are embedded or associate with suspected criminals).

In environmental crime enforcement, these methods of engagement are used to varying extents.

Poachers and couriers are relatively visible and numerous, and arrests of these occur in both source and transit countries. Routine arrest interviews can identify opportunities for pursuing further lines of enquiry – including for units specialising in connected crime types, and for units in other countries. Conducted effectively, this process gathers information to profile future offences as part of proactive investigations.

For a number of reasons, in-depth investigations identifying and apprehending major criminals are rare – but not without precedent. In order to reduce risk of detection, those controlling the trade will limit the knowledge of supporting criminal actors and remain protected. An ivory trader in China stated to journalistic investigators in 2010: *‘Generally, the big bosses don’t show their faces’* (Trader T4, 2010), which highlights why targeted investigations, incorporating a more sophisticated range of techniques, are sorely needed.

The UN Convention Against Transnational Organised Crime and UN Convention Against Corruption encourage special investigation techniques for the purpose of effectively combating organised crime and corruption, in accordance with what is possible and permissible under domestic law (United Nations Office on Drugs and Crime, 2012). For competent agencies with appropriate jurisdiction, these techniques can identify and engage the individuals with an intimate knowledge of how the trade is conducted, as well as offenders who represent the best value for money for where scarce enforcement resources can be directed.

As highlighted by the CITES Secretariat in relation to the illegal rhino horn trade (CITES, 2012), there is a general lack of understanding of the criminality higher up the trade chain. One reason is that the tactics highlighted are not universally embedded. Informants and

covert investigations generate intelligence, but the extent to which they are deployed varies, including between source, transit and demand countries. If actionable intelligence is being proactively generated and shared, it shows that one of a suite of more effective enforcement responses is taking place. Likewise, post-operational assessments can use what criminals think to indicate whether enforcement has actually had the intended impact.

Despite arrests, conviction rates and sentencing for environmental crimes are notoriously low (Rademeyer in Global Initiative, 2013). The whole criminal justice system, not simply enforcement officers, has to respond effectively.

Benefits to stakeholders

Knowing offenders' motivations and their perceptions about what helps them do business – including those offenders with greatest knowledge of trade – would benefit the variety of stakeholders who have jurisdiction and interest in combating environmental crime. When formalised, what offenders think could strengthen activities in the following different areas:

Relating to criminal justice system and resource allocation:

- **generates intelligence, which after evaluation and analysis can develop proactive investigations** – including profiling of subjects and premises;
- **identifies parallel activities which helps evidence-gathering for other suspected offences** – e.g. money laundering and tax offences;
- **encourages cooperation** – e.g. offender describes criminal links to other locations, in which case the corresponding authorities can be cooperatively engaged;
- **gains specific information on concealment methods which helps to direct tactical resource tasking** – e.g. equipment or detection dogs at ports of exit, or additional human resources at a border crossing exploited due to lack of officers;
- **informs results analysis on effectiveness of operations** – offenders' perceptions before and after operations take place;
- **provides an indication of what kind of operational decisions are being made to combat crime and how they could be extended** – to include more effective specialist investigation methods;
- **identifies a range of facilitators to criminal activity** which can be used to appeal for additional resources and application of anti-corruption measures.

Relating to crime prevention activities:

- **helps 'map' crime and identify gaps and weakness** – from which intervention and prevention measures can be developed;
- **gains specific information on methods (MOs)** – helps to strengthen weaknesses in the locale which create opportunities to commit crime;
- **directs preventative patrols** and helps site guardians exercise specific preventative measures.

Relating to roles and activities of civil society and policy makers:

- **supports calls for improved transparency and anti-corruption measures** –when offenders identify corruption and weak governance as helping their activities;
- **enables civil society to further hold governments accountable to their commitments to reduce crime** – especially as a counterweight to official reports

which downplay or deny there is a crime issue, or that enforcement has been completely effective;

- **helps studies on the effectiveness and impact of policy, legislation, trade decisions** – e.g. whether offenders reference these international/national decisions as facilitators or disruptors of criminal activities
- in the case of rumours of opening trade, **can provide early warning of offenders' expectations of the impact of expected decisions on business;**
- **likewise can be taken into account during development of new policy and legislation;**
- **aids development of demand-reduction initiatives** – e.g. gains information on trends and demographics of market demand;
- **can provide an 'early warning' indicator for conservation and protection measures** – e.g. offenders speak of sourcing replacement species;
- **profiles offenders against their motivations so appropriate and more effective criminal justice responses can be developed** – whether punitive, restorative or diversionary;
- **is of interest for stakeholders in associated cross-cutting issues** – such as weapons proliferation which impacts upon poaching, or infrastructure projects which can impact upon wildlife collection trends.

Relating to activities of academics and media:

- is a resource for research into **criminal motivations, psychology, and deterrents;**
- is a resource for **enhanced understanding of environmental crime;**
- is a resource to **develop tools to engage all stakeholders in multiple actions to detect, prevent and reduce crime (e.g. 'crime scripts')**.

Offender data is thus a valuable resource to inform understanding of the varied criminality involved in wildlife trafficking (Nurse, 2011; South and Wyatt, 2011) and to address inadequacies in current enforcement policy. Yet collection and use of data must be undertaken with care.

Whose perception is it?: Considerations when recording perceptions

Offenders engaged during the course of an investigation bring to the table their own agendas, motivations and justifications (Nurse, 2011; Sykes and Matza, 1957). When engaging with undercover officers, they may exaggerate to gain trust or smooth business along. In arrest interviews, they may be antagonistic, or they may be cooperative and provide valuable information. Gaining worthwhile and appropriate information is dependent on using trained officers who are experienced in a range of lawful investigation and interview techniques. Further, there are ethical considerations for all interactions, applicable but not limited to arrest interviews and research engagement of prison populations.

For the researcher/analyst, information from offenders can be gathered and analysed against information from informants, enforcement officers, the community, and contemporary and historical incidents. This process is already used in strategic problem solving, and such information sources can also be used as part of the Extra Routine and Systematic Opportunistic Research (ERASOR) approach, of which qualitative interviewing including of known and suspected offenders and prisoners, is a major component. This information has been used to identify individuals and stolen goods and connected markets as part of the

Market Reduction Approach (MRA), an inter-agency process designed to reduce theft, but suitable to other crime types (Sutton *et al.*, 2001). Sutton (2008) gives many examples from interviews with offenders.

Offenders' claims and evidence concerning trading activities require careful evaluation: the source, nature and handling of all information must be considered, with obvious discrepancies noted and corroboration sought. Statements may be vague or open to interpretation: checks and balances against introducing bias should be used. Similarly, the power dynamics of those collecting the information (enforcement / researcher) are important considerations.

Those working outside enforcement agencies, including academics, can also carry out semi-structured interviews with offenders who are consenting participants subject to guidelines, so responses can be explored where perceptions expressed by traders are summarised against certain themes, with evidential quotes.

In journalistic engagement of active offenders in the field, questioning and information-gathering protocols should be used (including style of questioning, introducing checks and balances, seeking verification). These can incorporate evidence of conversations to accurately reflect findings and reduce introduced bias, in a process which screens what is pertinent, non-pertinent and appropriate information to gather, maintain and use. Processes are subject to considerations including access, scope, trust and ethics and which should be reflected and accounted for in the project outline and regularly reviewed.

Applying criminal perceptions

Criminal perceptions may be applied in a variety of ways which can benefit a range of stakeholders in environmental crime. Two applications are discussed below: to enable the profiling of criminal activities and to assess the efficacy of law enforcement operations and criminal justice responses.

Profiling criminal activities

Profiling generates an overview of core and associated criminal activities and methods they use, and can also help to explore potential links between cases.

In a report on trade in Sumatran tigers, TRAFFIC feature an interview with a tiger hunter to explain poaching methods, competition and markets (Shepherd and Magnus, 2004). EIA investigations in Zambia in 2010 (EIA, 2010b) gained insights into the perceptions and attitudes of significant, urban ivory traders operating at that time, which here has been used to develop the following composite profile of their criminal activity at that time.

***Source of ivory:** From Zimbabwe, Democratic Republic of Congo (DRC), Namibia, Botswana and Angola. There are differences between certain countries: Zambian ivory can be sourced, but it might not be as good quality, it's smaller. It's cheaper to buy ivory in Angola. Poaching is easy in Zimbabwe, and you also get rhino horn from there. Some of the people we know just specialise in rhino horn, they don't deal in ivory.*

***Trafficking:** Corruption helps business. When you transport ivory, you can either make payments, in which case you might have to pay on both sides of border, or you can use your*

connections inside agencies. So it helps if you know a Customs officer and it helps to keep track of where he's posted and change the route you take when you need to. But in some countries, like DRC for example, they don't even bother to ask what you're transporting – but paying money can still help. It also helps to use transport that isn't checked much, such as aid vehicles, or use diplomatic channels.

We send ivory out either by plane or by ship. It's easier by ship. Lots of people put ivory into containers of timber. There are tricks to packing it so it won't get detected, like if you wrap it in aluminium foil. South Africa is a common exit, or we can use Tanzania, Mozambique or Kenya.

Market: *Mostly, ivory goes to China. The big buyers are Chinese, they buy big quantities. We're in contact with them.*

We also sell direct and regularly to Chinese people in this country. So you get to know the Chinese words for certain products and the prices. But there have been buyers from other countries too, like from France.

Supply: *We've got a quarter to nearly half a tonne available at the moment, and we can organise between a tonne and two tonnes in a month.*

Criminal justice system: *Trust is important to business. Even if you do get caught, you can go through the system and get out fairly fast, if you pay money.*

Other activities: *We've been in this business for a long time. We also deal in diamonds, copper, gold. But tougher laws mean it's harder to smuggle diamonds out of Angola – it's easier from Zambia now. We do other business too: every day, legal business.*

Several of the trafficking methods traders in Zambia highlighted were also described that year by ivory traders at the consumer end in Hong Kong and Guangzhou, China: '*Some do it [trafficking] by using waste ... you know how people trade in waste material from overseas ... they arrange a container for that ... and use aluminium foil ... because [X-ray] can't look through*' (Trader T5a, 2010). Interceptions of ivory shipments demonstrate the method of concealing ivory in waste and timber, ivory wrapped in foil, and the use of diplomatic links to traffick ivory.

Profiles can be more detailed or general, and can generate prioritised operational and strategic options for future action. These options might identify:

- need for training of officers to effectively deal with offences outside their traditional remit (O'Connor Shelley and Crow, 2009);
- engagement of additional agencies with jurisdiction and specialisation in crimes related to other commodities, such as rhino horn or minerals, for intelligence-sharing or joint operations;
- targeted operations against identified profiled premises, vehicles and trafficking routes;
- engagement of port authorities for targeted methods of detecting contraband and development of risk assessments;
- collaboration with authorities in other countries based on specific intelligence, or request to participate in specialised co-ordinated operations;

- need for anti-corruption initiatives, including to investigate specific agencies and units;
- need for specialist prosecutors and judicial reform.

Assessing the damage: Post-operational assessments

Governments may report to CITES that crime has been effectively deterred (CITES Management Authority of China, 2012), but this is not supported by evidence of tangible, measurable reductions in crime. Without context, isolated actions may be painted as successes, yet crime keeps occurring, as previously documented by non-government and media documentation of ongoing illegal activity and persistent offenders in well-established trading hubs.

If governments reported to CITES against a range of indicators relating to all stages in the criminal justice process, including deployment of more sophisticated enforcement methods, and conducted post-operational assessments of targeted actions, it would indicate a more thorough, committed and proactive approach to reducing illegal trade in addition to providing a baseline appraisal from which to identify areas for future improvement.

Assessments should take place during and following an operation to find out how effective actions have been and to ensure the same problems do not continue (Center for Problem-Oriented Policing, 2013). Knowing what offenders think can be a worthwhile indicator when strategically or tactically assessing whether the right kind of disruptive or diversionary tactics have been deployed, identifying best practice and areas for improvement.

Known offenders stating that targeted enforcement has stopped them from committing a particular criminal activity has been one positive outcome of problem-solving operations, resulting in significant reductions in crime – the heat simply isn't worth it. Metal theft, for example, is a growing and pernicious problem in the UK, valued at over £220 million a year (BBC, (2012) and feeding international markets. In north-east UK, Operation Hansell (2007) appeared to have little impact on metal theft; problem analysis identified the issue remained due in part to inadequate legislation, a situation where prolific offenders who had turned from other forms of crime to metal theft and a lack of knowledge around stolen asset markets. In 2011 a new campaign was launched, combining a change of local legislation and engagement of prolific offenders alongside targeted operations at specific sites and institution of a participatory crime prevention scheme. This resulted in a 60 per cent reduction in the crime over a 12-month period, and criminals formerly engaged in metal theft reported to patrolling officers that they had been deterred from their previous activity due to the greater level of enforcement given to it (Price, 2012). Motivations for committing crime may change so information needs to be timely. This may benefit intelligence analysis (operation intelligence assessments) during deployment of law enforcement resources.

From a strategic viewpoint, there are different kinds of offenders who have different motivations. Some offenders have fewer choices about committing crime than others, or different choices to make. South and Wyatt (2011) for example identify four categories of those involved in the illegal fur trade in Russia identifying different motivations on the part of offenders as well as different classifications of offender. Policy needs to reflect the varied criminality involved and be targeted at addressing both the behaviours and influencing factors involved in wildlife crime. Hunting, for example, may be a traditional subsistence activity, but absence of other income plus outside demand may instead encourage hunting for profit.

Alternatives can dissuade from this⁸ and in the case where activity is illegal, alternatives can reduce criminalisation of communities and risk of exploitation by others.

Post-conviction interviews can profile ‘types’ of criminals and explore whether the legal sanction they receive upon conviction (fine, imprisonment, community service) has actually deterred them from committing future crimes. Wealthy criminals may view fines as just another ‘business expense’, so more effective punitive actions should be considered, where feasible under law (Nurse, 2011). In other cases, restorative justice rather than punitive justice might be a more favourable response for another ‘type’ of offender who has different motivations or choices in committing crime.

Preventing crimes

Preventing criminal activity can start with harmonising domestic legislation with commitments under international mechanisms such as CITES, and continues with listening to offenders to inform prevention and diversion actions.

Knowing what offenders think has a huge potential to influence crime prevention activities, and it is often in this context that offender attitudes are gathered and used for other crime types. This information gives insights into criminals’ techniques and strategies, along with their reasoning while offending. To make crime prevention recommendations about vehicle thefts, Copes and Cherbonneau (2006) conducted interviews with convicted vehicle thieves, both on community supervision and in prison.

Interviewing at the post-conviction stage has the advantage that offending histories can be corroborated. Hearing directly from convicted criminals what real-world conditions enabled them to commit crime helps to make coordinated and nuanced prevention campaigns which complement legislation – whether those campaigns incorporate anti-corruption initiatives, better targeted patrols, improvements in the awareness of judiciary, or warning guardians of resources what actions they can take to prevent crime. A Metropolitan Police (2013) UK crime prevention poster campaign on London Underground quotes criminals on how they opportunistically commit crime, seeking to raise public awareness of how to reduce opportunity.

Mapping crime and networks

Criminologists can use offenders’ attitudes to profile and ‘map’ crime. This can include crime scripts, which looks at all the elements involved in commission of crime: before, during and after the criminal act.

A ‘script’, like a film script, sets out who the actors (offenders) are, where they operate, and what actions are required to expedite the offence. Scripts can ‘... draw from multiple information sources; interviews with offenders (to get their crucial viewpoint), [or] detailed investigative notes’ (Tompson and Chainey, 2011). When the stages of crime and its actors are mapped holistically like a flow, gaps and weaknesses enabling crime can be identified, and corresponding intervention points developed – along with what is not known. The advantage of this process is that it then identifies the agencies and policy-makers responsible

⁸ See for example Lebialem Hunters’ Beekeeping Initiative, available at www.bee4bushmeat.org [Accessed 23rd February 2013]

for different facets of enforcement and prevention – because reducing crime is not the job of enforcement agencies in isolation (EIA,2011).

Taking it a step further, Morselli and Roy's work (2008) on stolen vehicle exports incorporated these crime scripts on criminal decision-making processes, but merged it with analyses of criminal networks because '*without an understanding of the people executing [crime] we would have difficulty assessing a strategy for disrupting the process*' (Morselli and Roy, 2008).

This project used information related to Canadian Operations Siren and Togo of Project CERVO (1993-2005), a task force of law enforcement and security agencies. To understand who the criminals were and how they conducted business up and down the chain, they used information held by a number of agencies and, notably, transcripts from arrest interviews, police affidavits, physical and electronic surveillance transcripts, intelligence reports and information from past investigations (Morselli and Roy, 2008).

CITES and ivory: International decision-making and what criminals think

The international ivory trade was banned in 1989. Following two CITES-approved sales in 1999 and 2008, by 2013 there was an acknowledged massive rise in elephant poaching and illegal ivory trafficking (CITES, 2012) against a backdrop of minimal convictions in major criminal cases.

Investigative journalist engagement of ivory traders has found these traders are aware of CITES and progress in international decision-making processes. From 2000 onwards, different ivory traders in the demand country of China have provided insights into the blooming and tenacious trade, from exploitation of legal trading loopholes to organised criminal activities. A picture emerges of unevenly applied enforcement effort, with some sections of the authorities enforcing against the illegal trade and others profiting from it. Enforcement against premises trading ivory are typically described as checks and confiscations, rather than operations successfully targeting the 'big bosses' of the ivory trade. The entire time, traders have consistently referenced collusion and corruption, and how their government generates profit from ivory trade.

Nevertheless within CITES, discussions around re-opening of ivory trade have continued. For example a 'Decision-Making Mechanism for Process of Trade in Ivory' (CITES Decision 14.77) was adopted in 2007 and on the agenda for the 16th Conference of the Parties (CoP) to CITES in 2013 (CITES Secretariat, 2012; EIA, 2013b). There is no formal mechanism by which ivory traders' perceptions and anticipatory reactions about issues such as potential re-opening of trade have been considered during such discussions.

Mali (2012) has formally expressed its concern that international discussions could affect the decisions of criminals:

'Mali is concerned that the international community (and particularly the criminals involved in illegal wildlife trade) may interpret the deliberations on the decision-making mechanism as an indication that the resumption of ivory trade is being discussed or has already been approved. This could lead to an increase in poaching and illegal trade ... Mali would like to know which measures will be taken by the

Standing Committee before the decision-making mechanism is discussed at the CoP to prevent an intensification of poaching' (Mali, 2012: 13).

Ivory traders in China have demonstrated awareness of CITES and have anticipated how CITES decisions will impact their business. In 1999, Botswana, Namibia and Zimbabwe were permitted through CITES to sell ivory to Japan; in 2000, when engaged by EIA, traders in China referenced that sale, stating: *'We have been longing for this opportunity'* (Trader T1 2000).

One trader described the anticipated impact on his business of the elephant population downlisting in protection, from CITES Appendix I to Appendix II:

'Since the last few years, the African ivories have been flooding everywhere like a disaster ... its protection has been downgraded from category one to two. In this trend, the relaxation will get more and more ... If the 'relaxation' continues, the ivory market, especially for craft items like what we have, will bloom vastly. It is almost impossible that our products will be stagnated in market.'

– Ivory trader T1 in China, 2000

Traders have also revealed loopholes in China's domestic legal ivory trading system. While well aware of the 1989 international ban, traders in 2000 described various ways to circumvent it. One such method was by 'forgetting' to register 'old' (pre-1989) stock:

'The licence will indicate that the items were made 10 years ago. I can say that I bought them 10 years ago but I did not make the application at that time. Very natural indeed. Now I 'become aware' of the need to do so.'

– Ivory trader T2 in China, 2000

Traders also noted the importance of connections, corruption and collusion to business:

'You need to manipulate some relationships to do the export.'

– Ivory trader T2 in China, 2000

'Most of the officers in Customs normally pretend not to see anything.'

– Ivory trader T3 in China, 2000

In terms of supply and control of that supply, one trader observed:

'In the past, in mainland China ... even after the ban in 1989, huge amount of stock has still been kept by big department stores and trading companies ... since the last one of two years, we have not had such a huge quantity. If you want to find some, relatively it's still available. The properties of the Communist Party are pretty huge. So 'She' just sells it, bit by bit, slowly, with a good price.'

– Ivory trader T2 in China, 2000

These perceptions allow a look at trends in demand, supply and the nature of regulation and enforcement. Given that in 2000, traders discussed the lack of clarity around legislation, enforcement collusion in illegal trade, and government interests in ivory, from what follows it appears that these issues were never adequately addressed or reconciled.

In 2002, CITES approved a second ivory sale by elephant range states, but the actual sale to both Japan and China did not occur until 2008. The significant time lapse between the CITES decisions and actual implementation kept the discussion on the table. China itself reported that: *'Many Chinese people misunderstand the decision [to sell to Japan] and believe that the international trade in ivory has been resumed.'* (CITES Management Authority of China, 2012). Even by 2003, ivory traders in China engaged by EIA were concerned about supply. They spoke of not being able to guarantee availability: *'Stock is not always available to you, unless it is a Government deal'* (Trader T8, 2003).

In 2004, China was said to have demonstrated 'significant and commendable improvement of its law enforcement effort in dealing with a serious illegal ivory problem' (Anon 2004:7). The verification mission that took place in March 2005 concluded it was 'abundantly clear that China is now firmly committed to eradicating illegal activities' and that the legal ivory trade system 'offers an opportunity to eradicate, or at least significantly reduce, illicit trade' (CITES Secretariat, 2005: 7).

Traders encountered by EIA mentioned checks on premises, but apparent ease of evading detection: *'If the authorities conduct a check, they [the traders in shops] keep them [ivory products] hidden away. Otherwise, they will be confiscated'* (Trader T9 2005). Traders demonstrated awareness of the international ban although there were ways to circumvent it, such as 'cultural exchanges': *'On the surface it looks like a 'cultural exchange', but in actuality, it is for commercial purpose'* (Trader T10, 2005).

The overall tone of conversations shifted and traders began describing trafficking activities, including large consignments, in greater detail. When acknowledging some confiscations by Customs, traders also advised on trafficking methods for small items carried on the person. Yet they also described the movements of containers of ivory and the high costs associated with trafficking.

The clandestine nature of illegal trade was summarised by one trader who said: *'as for business, we have to respect our segment'* (Trader T11, 2005) – that 'don't ask' attitude helping business; in addition, how to take measures to reduce risk: *'we have risks too ... that is why I have a few factories scattered about'* (Trader T11, 2005).

By that time, the domestic market had grown. The same business stated: *'Actually, the domestic sale of ivory is already very good and sells very well'* with ivory products demanded *'as presents for high-ranking Government officials. Especially if it's to win a promotion at work.'*

Even then, the CITES-approved sale of ivory to China did not actually take place until more than three years later, in November 2008. In 2010, EIA engaged traders in China and Hong Kong, who described the quantity from this 2008 legal sale as minimal in comparison to demand – basically, a drop in the ocean:

'70 tonnes will all be used on the mainland. 70 tonnes is very little ... They won't carve these stuff with their 70 tonnes ... these are difficult to sell. They make these ... one year it will all be gone! There are so many people ... even if they kill all the African elephants, it won't be enough to make these [chopsticks]'

– Ivory trader T6 in Hong Kong, 2010

The amount sold to China was actually less, at a reported 62 tonnes (EIA 2011b): not only did ivory traders perceive that more legal ivory was available than was sold through CITES, they also believed this amount was not enough to satisfy market demand.

Traders also noted the ubiquity of illegal, trafficked ivory on the market, findings which have been since confirmed by independent investigations (Martin and Vigne, 2011; EIA, 2011c, IUCN, 2012):

EIA: How much of the raw materials available in the market is legal?

Trader: Not even 10 per cent.

– Ivory trader T5b in China, 2010

Reports of enforcement were varied; the Asian Games was given as a reason for strict checks, rather than any long-term commitment. Rather, if you continue about your business quietly, you should be okay:

'We dare not do it too big. Even though the Government doesn't have their eyes on you every day, you can't 'beat the drum' about it either. Otherwise, for them, they are unable to keep it under the lid. It's always like that.'

– Ivory trader T5a in China, 2010

Traders described the risks and 'sensitivities' involved in illegal trade, one even referencing the State Forestry Administration (SFA)'s legal trade guidance, but this didn't mean it could not be done.

In 2010, trafficking methods and routes were referenced with far more frequency and detail than in any previous year. The importance of Vietnam, Guangxi and Hong Kong; the smuggling of ivory wrapped in aluminium and concealed in waste (reflecting that year's information from traders in Zambia) and carried in cages beneath vessels; continued references to corrupt Customs officers.

The CITES Management Authority of China reports that it 'has tried her best to control the illegal trade in ivory. We have taken all measures we can take in the past. We don't know if there is any other country that does more than China' (CITES Management Authority of China, 2012). Yet according to the traders' perceptions, if 90 per cent of the ivory available to buy is illegal, what has gone wrong?

Before countenancing discussions on further legal trade, the CITES community needs to conduct a study into why current legal ivory trade systems and controls are failing. TRAFFIC (2011) suggest that '*failure to implement key regulatory features in China's legal control system, such as the visible display of product identification certificates with legal ivory products at the retail level, has been noted in recent published reports (Martin and Vigne, 2011; EIA, 2011). Such transgressions seem to have seriously compromised the integrity of the system and need to be addressed*' (2011: 24). Incorporating traders' perceptions into the equation will help to inform this.

Likewise, domestic legislation can stimulate demand and supply for CITES-listed species. China's legal trade in Asian big cat skins from captive sources runs contrary to CITES Decision 14.69: '*tigers should not be bred for trade in their parts and derivatives*' and has

instituted a mechanism through which skins of wild Asian big cats, poached in source countries such as India and Nepal, could be laundered (EIA, 2013a).

EIA has documented the impact on business of China's Government Notification 139 (2005), which '*enables the pilot use of captive-bred tiger bone for medicine and the reduction of the use of leopard bone.*' This Notification is referenced in a report and business plan prepared in 2005 which describes the 'great market potential' for tiger bone wine, prompting the Sanhong Biotechnology Company to invest millions to produce a range of 'Real Tiger Wine' (EIA, 2013a).

China's Government policy has encouraged the growth and expansion of operations licensed to keep and breed tigers. The trade from these facilities directly contradicts demand-reduction initiatives and undermines both domestic implementation of CITES and international conservation programmes such as the Global Tiger Initiative (GTI), aimed at doubling the world's wild tiger population by 2022 and ascribed to by all tiger range countries, including China.

The lack of clarity regarding domestic legislation, failure to implement CITES domestically, and unevenly implemented enforcement means that governments themselves have both directly and indirectly stimulated demand. Traders are profiting from this (EIA, 2013b).

Conclusion and recommendations

Enhanced political will is needed to increase the prioritisation of environmental crime in criminal justice policy and response, including trade in endangered and threatened species, and to reduce a time-critical threat. It requires a range of coherent responses.

Whether contributing to more robust criminal justice processes or to holistic assessments concerning the impact of international decision-making processes, the motivations and perceptions of criminals both highlight the gaps and indicate where change can occur. They are a valuable missing piece of the jigsaw.

In addition to the measures presented above, tackling corruption to reduce environmental crime is vital. Application of tools such as the ICCWC Wildlife Crime and Forest Analytic Toolkit may identify and analyse general corruption offences under domestic criminal law. Enforcement measures relating to corruption investigations may be undertaken, including the incorporation of anti-corruption legislation in environmental crime. Countries may strengthen anti-corruption legislation, bodies and oversight.

Transparency measures must extend to the engagement and inclusion of independent stakeholders including civil society in monitoring processes, such as may occur in the monitoring of forest crimes and permit allocation processes.

Law enforcement responses to environmental crime problems need to further incorporate an intelligence-led, problem-solving approach. Understanding of the value of utilising proactive as opposed to reactive responses, including analysis and development of intelligence, should be promulgated. This may be achieved through applying knowledge gained from other serious organised crimes to environmental crime. Environmental crime priorities may be identified and included within national organised crime strategies. Agencies and units can designate intelligence to act as champions and focal points.

In order to fulfil their roles and mandates, law enforcement capacity needs to be expanded to gather, analyse and action intelligence with the aim to undertake targeted investigations and interventions based on thorough problem analysis, supported by post-operational evaluations to identify best practice.

Tactical methods to engage known and suspected environmental criminals are similar as for other crime types, through the application of corroborated criminal information as a source of intelligence to generate tactical and strategic profiles of subjects, premises, locations and risks to support continuing investigations, evidence-gathering, analysis and resource assignment. Information may be applied to direct collaborative operations across law enforcement or intelligence agencies and specialist units, both domestically and internationally. Ethical post-conviction interviews are a source of information which may help to develop future crime-prevention strategies, including diversionary and alternative schemes, and to inform reviews of punitive or restorative legal sanctions.

When gathered, criminal perceptions may be incorporated into CITES and other multilateral environmental agreements and bilateral decision-making processes to fulfil reporting requirements against distinct and wide-ranging criminal justice activity indicators. Through such reporting, these decision-making processes could extend recognition to criminal perception and incorporate them into discussions as indicators of trends in supply, demand, substitute species and enforcement activities. Furthermore, studies on impacts of the decisions made at CITES such as legal ivory sales could incorporate criminal perceptions as part of robust review mechanisms.

It is also recommended that a body of literature to inform awareness and policy-making is developed, in order to enhance the awareness of environmental crime and demonstrate the possibilities of application of criminal perceptions to develop crime detection, disruption, prevention and reduction measures.

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Corporate Environmental Crime in the Electronic Waste Industry: The Case of Executive Recycling, Inc.

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Abstract:

The booming industry of personal electronics has created a consequential market of electronic waste which has led to an egregious transference of harm from the global north to the global south. National and international legislation regulating the transfer of electronic waste (or, e-waste) has been unable to keep up with the pace of technology and consumerism, and has led to the movement of this hazardous and toxic waste from developed nations into still-developing and undeveloped nations. In the United States, a lack of enforcement coupled with a lack of prosecution has led to rampant infringement of already lax regulatory structures. The case of Executive Recycling, Inc. highlights the first federal prosecution of an electronics recycler in the United States, demonstrating increased awareness of the issue. Multiple changes need to take place in order to bring under control the illegal electronics recycling industry, including increased regulation and enforcement as well as producer and consumer responsibility.

Keywords: Green criminology, environmental crime, electronic waste, e-waste, corporate crime.

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Introduction

Electronic waste, or, 'e-waste', can be loosely defined as the accumulation of discarded televisions, computers, cell phones and other electronic devices containing hazardous substances (i.e. cadmium, mercury and lead) which are detrimental to human and environmental health if improperly disposed. E-waste has rapidly evolved into a critical global problem, as the last century has witnessed the birth and subsequent expansion of the personal electronics market. The continued—and seemingly endless—growth of technological innovation has led to the production of new commodities which consumers consistently update in an effort to stay abreast of the latest technology. Both 'planned' and 'perceived' ideas of obsolescence contribute to the constant stream of manufactured and discarded electronics. Unable to keep up with increased rates of production, consumption, and disposal, the electronic waste market has become saturated with broken and 'outdated' electronics in need of a final resting place. The switch to digital television in the United States in 2009 led to a sharp increase in the disposal of 'tube' televisions containing cathode ray tubes (CRTs), which are hazardous and toxic to both human and environmental health. These CRTs are known to contain up to eight pounds of lead each and are difficult and expensive to properly dismantle, recycle, or ultimately, throw away. The disposal of CRTs, along with a variety of other electronic waste, has led to the development of a new and profitable industry of e-waste, generating over eleven billion dollars annually (Liddick, 2011). The pursuit of profit in e-waste, coupled with lax enforcement, has led to the circumventing of environmental laws and regulations. This research will focus on national and international laws governing the transference of electronic waste as well as the human and environmental consequences of improper and illegal disposal. To highlight the problem, a case study will center on Executive Recycling, Inc., an electronics recycling firm based in Englewood, Colorado, which has been convicted of criminal charges stemming from the illegal transfer of e-waste. Theories of environmental justice and recent theoretical perspectives in green criminology will first be employed in order to inform and frame the research as well as discuss the critical issues and complications surrounding environmental crime.

Theoretical Framework

Interdisciplinary in nature, research efforts in green criminology encompasses a myriad of perspectives. The environmental, social, political and economic implications of the international transfer of e-waste are complex; environmental justice and green criminology can both work to illuminate not only the environmental harms of e-waste, but also the social harms that are inherent with any kind of toxic waste.

The consequences of globalization have penetrated almost every corner of the globe at a cost that is only just beginning to be realized. As suggested by environmental justice activists, these costs are disproportionately impacting marginalized populations:

'Many have noted that there is a direct relationship between the increasing globalization of the economy and environmental degradation of habitats and the living spaces for many of the world's peoples. In many places where black, minority, poor or indigenous people live...waste from both high- and low-tech industries, much of it toxic, has polluted groundwater, soil and the atmosphere' (Robinson, 2000: 18).

It is estimated that roughly 400 to 500 million tons of hazardous waste are produced annually in the world—approximately 35 to 40 million tons of this waste will at some point in time

cross international borders (Liddick, 2011). Statistically, this waste is more likely to move from consumption in the global north to disposal in the global south, subjecting already marginalized populations to harm.

Simply stated, environmental justice is the right of all individuals, irrespective of race, ethnicity or income, to equal protection from harm caused by environmental hazards. As defined by the Environmental Protection Agency (EPA) in the United States, environmental justice denotes:

‘[t]he fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies’ (US EPA).

By fair treatment, the United States EPA holds that no group should disproportionately bear the burden of environmental consequences. A more widely accepted definition has since been expanded to include the equal distribution of environmental amenities as well (such as open space, parkland, protected waterways etc.) so that no one group has inequitable access to environmental benefits or exposure to environmental harm. These perspectives maintained by environmental justice are also echoed in the tenets of green criminology.

Broadly speaking, green criminology centers around the study of environmental harm, environmental laws and environmental regulation, as well as victimization and justice issues at local, national and international levels (White, 2009). Green criminology is particularly relevant to e-waste research as it encompasses the viewpoints of environmental justice, and is frequently an international issue:

‘A concern with environmental harm inevitably leads the analytical gaze to acknowledge the fusion of the local and the global, and to ponder the ways in which such harms transcend the normal boundaries of jurisdiction, geography and social divide. This observation is important because so much environmental harm is intrinsically transnational in nature’ (White, 2009: 230).

Transnational environmental harm can include such happenings as trans-border pollution, oil and chemical spills in international waters, illegal trade in logging and fishing, and, of course, the illegal transference and subsequent disposal of hazardous and/or electronic waste (White, 2009). The transnational movement of environmental harm (and e-waste specifically) is part of a larger process of the externalization of harm (White, 2011). This externalization process can occur either at the point of production (involving the environmental impacts and pollution associated with production) or can involve the ‘socialization of harm’ where the impacts are experienced directly by the communities to which the ‘harm’ (or e-waste) has been transferred (White, 2011). Pellow (2007) argues that the externalization of harm occurs for four reasons. First, ‘an exponential increase in the production of hazardous waste and the emergence of more stringent environmental regulation in industrialized nations’ (Pellow, 2007: 8) creates incentive for disposers of waste to seek options beyond their national borders. Second, the ‘widespread need for fiscal relief among southern nations...often leads government officials in the South to accept financial compensation in exchange for permission to dump chemical wastes within their borders’ (Pellow, 2007: 8-9). Third, ‘economic globalization...has a logic that dictates that industries must cut costs and increase profits or simply fail...[t]his means those wastes will be traded and dumped in nations and communities where, as a result of unstable states and vulnerable economies, pricing will be

more profitable to waste management firms and brokers' (Pellow, 2007, p. 9). And fourth, 'the global waste trade is a racist and classist culture and ideology within northern communities and institutions that views toxic dumping on poor communities of color as perfectly acceptable' (Pellow, 2007, p.9). As Pellow (2007) and White (2011) articulate, in many instances (as is the case frequently with e-waste) environmental harm is linked not just to the national economy, but also to the international political economy. Corporate criminals involved in the e-waste industry are often engaged in activities that would be considered illegal in their home nation, but once transferred to another nation, may technically become 'legal.' As would never be tolerated in the United States and other industrialized countries, peripheral nations endure buried waste that leaches into the ground and water supply as well as unburied waste that is burned in the open air, subjecting their populations to unmatched levels of environmental injustice made possible by the evolution of both licit and illicit e-waste industries.

A Brief History of the Illegal Waste Market

Consumerism has only increased with globalization, turning even waste into a profitable commodity. White (2011) suggests that the commodification of waste can be traced back to a booming waste-removal industry in Europe following the Second World War. Italian organized crime families have been charged with trafficking waste for decades—some estimates suggest these 'families' have been responsible for the illegal transfer of over 35 million tons of garbage around the world each year (Liddick, 2011). In recent years, the 'waste' market has broadened to include toxic waste, and more specifically, electronic waste. Some have pointed to the relaxation of trade policies in the 1980s as playing a role not only in globalization, but also in the expansion of transnational organized crime. The concurrent development of environmental laws during this decade led to a substantial increase in the cost of responsible recycling practices (ibid, 2011; White, 2011) which in turn created an ideal environment for an illicit market in the trade of waste.

Feckless regulation coupled with a demand for inexpensive waste disposal services has transformed the illegal waste market into a booming industry, generating over eleven billion dollars annually (Liddick, 2011). The e-waste industry impacts not only the environment, but also the international economy and society as a whole:

'Illegal industries distort the legitimate marketplace and undermine businesses that choose to play by the rules, and consumers are denied the opportunity to make more responsible choices. Developing nations are robbed of their natural resources, and governments denied revenues that might be used to benefit their citizens. Profits are so great they are used to finance conflict and war, and public officials and the very entities established to police these economic sectors are systematically corrupted. Moreover, legitimate capital is applied in such a way that governments are obliged to make decisions that tend to facilitate illegal practices and maximize profits for a few elites at the expense of the environment and impoverished human populations' (ibid, 2011: 6).

As indicated, participation in the illegal transfer of waste is not limited to those who are considered typical 'criminals,' but often includes corporate polluters, corrupt public officials and informal public and private markets. As a testament to its expansive range, the trafficking of hazardous and toxic waste has even been likened to the international drug trade in both its scope and profitability (ibid, 2011). Currently, Organization for Economic Cooperation and Development (OECD) nations routinely ship e-waste to non-OECD nations, in spite of the

fact that there are several national and international regulations designed specifically to prevent such movement. An inherent problem with these transfers is that harmful e-waste traffics from developed nations that have the technology and ability to safely handle and recycle this waste into nations which do not. This leads to transference of harm, disproportionately affecting populations which are already marginalized, and leading to severe forms of environmental injustice.

The Illegal Market of Electronic Waste

Though the illegal waste industry may trace historically back to Europe, the United States has wasted no time in becoming a contributing member. Participation in the industry is not entirely consistent, as there are multiple tiers of contributors who vary in their levels of participation. Ranging from organized crime families at the highest levels to ‘small time’ brokers at the bottom, employees of the e-waste trade can best be described as “ad hoc” (Liddick, 2011):

‘Research demonstrates that a wide range of societal players are involved, and includes “conspiracies between waste producers, collection and transport companies, storage firms, managers of dump sites, chemists, specialized laboratories, and even farmers” (Massari and Monzini, as quoted in Liddick, 2011: 19)...generators, haulers, treatment specialists, storage providers and disposal players simply agree to violate regulations to save money and increase profits’ (Liddick, 2011:19).

The process of recycling these products responsibly cuts down tremendously on revenue. For example, it *costs* recyclers roughly 20 dollars to responsibly recycle an average computer (Gibbs, McGarrell, and Axelrod, 2010). Because of this, recyclers often charge a fee to accept these items and sometimes only break even, which may lead even conscientious recyclers to export these products in order to generate revenue:

‘Once collected, legitimate and illegal operators usually transport the materials to developing nations, who welcome the “recycling” revenue. The profit comes not only from the extraction of the precious metals, but also from the large price differentials between developed and Third World countries. For example, glass-to-glass recycling of computer monitors costs 50 cents per pound in the United States, but only five cents in China—Third World recycling companies pay their workers (often children) low wages and are typically unconcerned with safety or health measures, and are not burdened by stringent environmental rules’ (Liddick, 2011: 30).

The economic logic of exporting waste to nations which do not regulate or require safe recycling is sound, in spite of the environmental and social consequences. It should be no surprise that an industry functioning on lax environmental regulation and enforcement—with the option to ‘double down’ on profit—is flourishing.

International Regulation of Hazardous and Toxic Waste

Stemming from a variety of social movements in the 1960s, nations around the globe began to acknowledge the growing problem of environmental harm and subsequently took steps to reduce anthropocentric destruction. Additionally, industrialized nations also recognized that the global south seemed to be bearing the burden of technological advancement and consumerism in the global north. It was clear that lax environmental regulation in these developing nations, coupled with financial compensation for products that were otherwise

valueless in industrialized nations, made these peripheral regions ideal targets for waste exportation:

‘The lower disposal costs in developing countries generally stem from low or nonexistent environmental standards, less stringent laws, and an absence of public opposition due to a lack of information concerning the dangers involved. Given these considerations, the economic logic for exporting hazardous waste to developing countries is indisputable’ (Lipman, 2002: 68).

In 1982, the United Nations Environmental Program (UNEP) became the first to develop plans to regulate the international waste trade; by 1987, UNEP had drafted the Environmentally Sound Management of Hazardous Wastes guidelines, and the United States, the European Commission (EC) and the OECD had also established regulations governing transboundary toxic waste. While substantial bodies of legislation governing the illegal transfer of hazardous waste had been developed, they were somewhat ineffective at preventing it. Much of the legislation called only for ‘prior informed consent,’ meaning the exporting nation would have to notify the importing country of the contents of the shipment, and then obtain their ‘permission’ to send it. This did little to stem off shipments from the global north to the global south, and did nothing to prevent illegal shipments that were regularly moving between nations. In spite of the fact that close to forty developing nations had banned the import of waste by 1988, more still were accepting it. In 1989, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal was drafted in order to address these issues.

To date, the Basel Convention has 176 signatory parties, with only the United States, Afghanistan and Haiti failing to ratify the agreement (Basel Convention, 1989). The Basel Convention requires the notice, informed consent of the importing party, and subsequent tracking of waste across national boundaries (Basel Convention, 1989; Lipman, 2002; Schneider, 1997). The Convention does not actually *ban* the transboundary movement of waste (except to Antarctica), but instead seeks to *regulate* the movement of waste based on a process of prior informed consent (Lipman, 2002); in order for hazardous waste to be transported from one nation to another, authorities in both the shipping and receiving nations were to be notified in advance and provide written consent of the shipment (Basel Convention, 1989; Lipman, 2002). Failure to obtain consent (and documentation of such) prior to the movement of the waste is illegal under the Convention (Basel Convention, 1989; Lipman, 2002). In addition, Section 2(e) under General Obligations of the Basel Convention requires parties to prohibit the import of hazardous wastes if ‘parties, particularly developing countries, which have prohibited by their legislation all imports, ...has reason to believe that the wastes in question will not be managed in an environmentally sound manner’ (Basel Convention, 1989: 10).

Though perhaps the objectives behind the Basel Convention were well intentioned, critics accused the convention of ‘legitimizing international toxic waste dumping rather than criminalizing it’ (BAN, 1998). Following these accusations, new decisions were made regarding the import and export of waste and were specifically designed to protect peripheral nations. By 1994, Decision II/12 was proposed, banning the export of hazardous wastes from OECD nations to non-OECD nations; by 1995 the Decision (now called the ‘Basel Ban’) was adopted and took effect on January 1, 1998 (Basel Convention, 1989; BAN, 1998). Under the Basel Ban, the exchange of e-waste between developed and still-developing nations is permitted only if the items can be recycled or somehow reused. This aspect of the Basel

Convention (again, though well-intentioned) has created a massive loophole in the legislation, as imports are now more often labeled as material to be ‘recycled’ rather than ‘dumped’ (even if they are damaged and beyond repair). While some portions of these shipments are able to be recycled and reused by the recipient country, only a very small portion of the shipment may be salvageable. Estimates suggest that less than 25 percent of shipments labeled for recycling are used for such; the rest is often irreparable junk (Ladou and Lovegrove, 2008; Liddick, 2011; Schmidt, 2006). After the usable items have been pillaged by brokers and consumers, the remaining waste may be burned (releasing dangerous chemicals into the air), improperly buried (releasing dangerous chemicals into the ground and water supply), or simply left to sit (Ladou and Lovegrove, 2008; Liddick, 2011; Lipman, 2002; Schmidt, 2006), clearly violating the intended protections of Section 2(e) under the Basel Convention as well as general environmental safety practices.

Regulation of Hazardous and Toxic Waste in the United States

While the United States is behind in international environmental agreements, it was proactive in establishing early national environmental legislation. Following such important legislation as the Clean Air Act and the Clean Water Act in the early 1970s, the Resource Conservation and Recovery Act (RCRA) was passed in 1976 in order to address issues with accumulating waste and subsequent risks to human health. The RCRA regulates the generation, transportation, treatment, storage and disposal of hazardous waste in the United States (EPA, 2011). Prior to this Act, hazardous waste had yet to be legally distinguished from other waste material (Liddick, 2011), thus immediately creating the need for legal disposal options (which were not always available and/or economically attractive to corporations in need). The lack of affordable disposal options led to frequent infringement of RCRA guidelines or the failure to comply altogether; ironically, these behaviors were rarely curbed by RCRA enforcement:

‘The RCRA was poorly implemented and enforced from the start—the lack of a legitimate hazardous waste industry at that time necessitated interim licensing and bred lax monitoring of the manifest system. In fact, the manipulations of manifests allowed corporate entities to “orphan” their waste, and thus escape liability. Even minus cases of public corruption and regulatory incompetence, private waste generators effectively lobbied Congress so that the RCRA would demand less of them, minimize their liability, and ultimately make the industry amenable (though perhaps not purposefully) to organized crime infiltration’ (Liddick, 2011: 18).

In addition, it has frequently been suggested that the RCRA pales in comparison to international law governing hazardous waste (Billinghurst, 2005; Kahhat, Kim, Xu, Allenby, Williams, and Zhange, 2008; Liddick, 2011). For example, many items listed as hazardous waste in the international Basel Convention are classified as ‘nonhazardous’ or ‘non-waste’ under United States law and therefore are not covered by the RCRA (EPA, 2011; Liddick, 2011) or other national legislation, which once again, creates a very large loophole for electronic waste.

What should be noted is that the United States began specifically regulating the export of CRTs¹⁰ in January of 2007. The so-called, ‘CRT rule’ strictly stipulates that exporters must

¹⁰A cathode ray tube (CRT) is a vacuum tube that is used to create images in the form of light and is commonly found in items such as older models of televisions and computer monitors. CRTs contain toxic substances (such as cadmium) and can also contain leaded glass, rendering them extremely hazardous if not properly disposed of.

file a notification of the export of CRTs with the EPA. In addition, if the CRTs are designated for recycling purposes, the exporter must also obtain consent from the importing country in order for the shipment to be approved (GAO, 2008). In spite of these regulations, CRTs are routinely illegally exported from the United States to peripheral nations in Asia and Africa (ibid, 2008). The opportunity for profit through the sale of 'recyclable' electronics to developing nations is far more attractive than the expensive costs associated with recycling in the United States. Posing as overseas scrap brokers, an undercover operation conducted by the Government Accountability Office (GAO) in 2008 found that 64 out of 343 electronics recycling and trading companies surveyed in the U.S. were readily willing to illegally sell untested, nonworking or broken CRTs (ibid, 2008). What was perhaps most telling about the GAO operation was the ease with which these buyers were able to circumvent EPA regulations, and their casual or apathetic perspective on doing so. Of the 64 companies that responded to the solicitations, 43 were ready and willing to export non-working CRTs to the fictitious buyers, and only one followed regulations and submitted a notification to the EPA to do so legally (ibid, 2008). The following is a summary of the correspondence between the GAO's fictitious e-waste buyers and the electronics recycling agencies they communicated with:

'A representative of an electronics-recycling company in Colorado told [the GAO] that the company does not export CRTs; instead, all CRTs are recycled in-house, so the CRT rule does not apply. This same person offered to sell 1,500 CRT monitors and 1,200 CRT televisions, which were ready for immediate shipment, to our fictitious broker in Hong Kong.

A representative of an electronics-recycling company in Washington State told [the GAO] that all of its CRT monitors are sent to its shredding facility in Oregon. A sales associate at the company, however, offered to sell four containers of CRT monitors (approximately 3,200 units) in April 2008 and another 20 containers (approximately 16,000 units) in June 2008 to our fictitious broker in Hong Kong.

A representative of a metal-recycling company in Illinois told us that the CRT rule does not apply to this company because it sends all of its CRT glass to a lead smelter in the United States. In response to an email inquiry to ship nonworking and untested CRT monitors to Southeast Asia, however, this person wrote back, "What are you paying for the monitors? Let me know and I'll give you an inventory count" (GAO, 2008: 25).

The undercover operation exposed the duplicitous nature of the e-waste industry: when corresponding with government representatives, these companies reported responsible and law-abiding recycling practices; when approached by illegal brokers, the same companies seemed all too eager to sell (and profit from) illegally transferred e-waste.

Perhaps the most ironic (and vexing) element of the illegal electronic waste market is the 'greenwashing' perpetrated by the parties involved. As environmental preservation has become an increasingly global issue, it has also become popular, making it a valuable tool for marketing. The proclamation of electronics recycling and trading firms to be environmentally responsible is widespread; a handful of these electronics recyclers were even holding 'Earth

Day' events where they would collect electronics for free (waiving the fee that generally accompanies the collection of e-waste). Unbeknownst to their customers, these same companies were caught selling these items to overseas brokers (BAN, 2011; GAO, 2008). Other recycling firms were still charging a fee to the consumer 'to cover recycling expenses' (GAO 2008: 25), and thus profited twice—once from the collection, and again when they sold these discarded electronics to illegal (or legal) brokers. Almost all of the companies observed in the undercover GAO investigation purported 'environmentally friendly' practices in advertisements while concurrently violating U.S. environmental regulations and knowingly contributing to illegal e-waste disposal abroad (GAO, 2008).

What is undoubtedly a contributing factor to these illegal exports from the United States is not a lack of awareness, but instead the lack of enforcement of EPA and RCRA regulations. In 2005 it was estimated that nearly 90 percent of CRT containing products collected in the U.S. (for recycling) were in fact exported to developing countries (Gibbs, *et al.*, 2010). Even though the EPA has the authority to mete out criminal penalties of up to \$50,000 per day of violation as well as imprisonment of up to two years against individuals who knowingly violate the CRT rule, it is rarely enforced (GAO, 2008). In fact, the CRT rule was in force for over 18 months before the EPA issued its first administrative penalty complaint (let alone criminal sanction), which was only imposed as a result of the Government Accountability Office investigation. It should be noted that between January of 2007 and August of 2008, 26 shipping containers filled with used CRTs had been intercepted by Hong Kong authorities and returned to the United States; in every case, the exporter did not notify the EPA (violating the CRT rule) and did not face sanctions (*ibid*, 2008). These violations of U.S. protocols are compounded by the fact that CRT imports also expressly violate Hong Kong's hazardous import laws (Environmental Protection Department, 2013; GAO, 2008). Despite regulations on both sides, Hong Kong is a frequent recipient of illegal e-waste from the United States. Investigations by both the GAO (2008) and the Basel Action Network (2012) have recorded shipping containers bouncing back and forth between the U.S. and Hong Kong ports multiple times, without any action from the United States EPA. Issues with proper enforcement seem to underlie the major weaknesses of e-waste regulation both nationally and internationally. The deputy director of the EPA indicated to the GAO (2008) that the EPA's enforcement of the CRT rule relies primarily on tips and complaints and initiates few investigations on its own. Even recyclers who evade the law themselves suggest, 'If [the] EPA whacked some [exporters], then they would comply with the rule' (GAO, 2008: 30). Clearly, more stringent enforcement is necessary if e-waste regulation is to be effective in the United States.

As the only industrialized nation not a party to the Basel Convention, the United States also lacks both comprehensive national and international policies governing the movement and disposal of electronic waste. As one of the largest consumers in the global electronics market, a significant share of illegally dumped e-waste can be tracked back to the United States.¹¹ In April of 2008, the Committee on Science and Technology of the House of Representatives met for a hearing on electronic waste, which discussed the management of e-waste, the challenges of recycling e-waste, and efforts to decrease toxic materials used in products as well as the possible implementation of a 'take-back' policy for producers of these products (U.S. House of Representatives, 2008). The hearing highlighted that thirteen states across the

¹¹In the United States, roughly 50 – 80 percent of e-waste designated for recycling annually is illegally shipped to Asian nations, including but not limited to: China, India and Pakistan (Xing, Chan, Leung, Wu, and Wong, 2009).

nation had already implemented e-waste regulation,¹² but that the U.S. government had yet to do so. In the following February of 2009, the Committee on Science and Technology of the House of Representatives met for a hearing on electronic waste, where testimony was presented that estimated only eleven percent of e-waste in the United States is properly recycled. In addition to the difficulties of convincing consumers to recycle, research has found the roughly 80 percent of e-waste *intended* for recycling in the U.S. is not actually recycled in the nation, but instead exported, sometimes illegally (U.S. House of Representatives, 2009). In the 2008 report put forth by the GAO entitled, 'EPA Needs to Better Control Harmful U.S. Exports through Stronger Enforcement and More Comprehensive Regulation' it was found that current U.S. regulation fails to deter the export of hazardous e-waste for a variety of reasons:

'Existing EPA regulations focus only on CRTs. Other exported used electronics flow virtually unrestricted—even to countries where they can be mismanaged—in large part because relevant U.S. hazardous waste regulations assess only how products will react in unlined U.S. landfills.

Companies easily circumvent the CRT rule. GAO posed as foreign buyers of broken CRTs in Hong Kong, India, Pakistan, and other countries, and 43 U.S. companies expressed willingness to export these items. Some of the companies, including ones that publicly tout their exemplary environmental practices, were willing to export CRTs in apparent violation of the CRT rule...

EPA's enforcement is lacking. Since the CRT rule took effect in January 2007, Hong Kong officials intercepted and returned to U.S. ports 26 containers of illegally exported CRTs. EPA has since penalized one violator, and then only long after the shipment had been identified by GAO. EPA officials acknowledged compliance problems with its CRT rule but said that given the rule's relative newness, their focus was on educating the regulated community. This reasoning appears misplaced, however, given GAO's observation of exporters willing to engage in apparent violations of the CRT rule, including some who are aware of the rule. Finally, EPA has done little to ascertain the extent of noncompliance, and EPA officials said they have neither plans nor a timetable to develop an enforcement program' (GAO, 2008: 2).

To correct these egregious failures of current legislation, the GAO (2008) recommended the expansion of hazardous waste regulations to cover other exported electronics, the ratification of the Basel Convention, and the establishment of coordination with Customs and Border Protection to improve the identification and proper tracking of exported electronics. What can be readily gleaned from the report is that the current state of environmental legislation and regulation in the U.S. is ineffective and unproductive.

¹² By 2012, twenty-five states in the U.S. had implemented e-waste regulatory policies (Gui et al, 2012).

The Case of Executive Recycling, Inc.

Started by owner and CEO Brandon Richter in 2004, Executive Recycling, Inc. was an electronics recycling company based out of Englewood, Colorado. Billed as a large-scale recycling firm, the company website advertised a variety of recycling services informed by over 20 years of combined information technology experiences (Executive Recycling, Inc., 2008). Policies maintained by the company indicate that Executive Recycling, Inc. was aware of the legal ramifications of improper handling of electronics; information on the former company website (www.executiverecycle.com) offers assurance to customers that their old electronics will be handled responsibly, promising protection against identity theft from old hard drives, as well as proper and safe recycling methods. Under a section titled “Transfer of Liability/Certificate of Recycle” the website stated:

‘We're so confident that we will do the job right, that we provide you with a Certificate of Recycle - which officially transfers responsibility for proper disposal (and any potential liability) to us - and away from you’ (Executive Recycling, Inc., 2008).

In addition, the company carried ‘Pollution Liability Insurance’ which advertised additional protection to customers—up to two million dollars of protection from ‘any type of issues that may arise of e-waste recycling’ (Executive Recycling, Inc., 2008).

The company website also discussed the environmental dangers of improperly recycled e-waste, detailing the detrimental human and environmental health concerns related to the leaching of chemicals from e-waste (such as lead or mercury) into soil and waterways should they not be properly disposed of. Touting a local recycling event the company was hosting, they promised participants, ‘your e-waste is recycled properly, right here in the U.S. - not simply dumped on somebody else’ (CBS 60 Minutes, 2008). Responsible policies such as these landed Executive Recycling, Inc. major contracts (e.g. a multi-year contract with the city of Denver, Colorado for all of their recycling needs) and afforded them the opportunity to expand to a multi-state operation (ibid, 2008). According to their website, in November of 2008 Executive Recycling completed an audit with the State of Colorado Department of Public Health and Environment and was found to be in compliance with the State of Colorado's Universal Waste law. This very same month, the company came under the national spotlight on primetime television.

In November of 2008, the CBS network broadcast a special report on its popular *60 Minutes* program exposing Executive Recycling, Inc. as a participant in the illegal e-waste market. CBS correspondent Scott Pelley traveled to one of the most toxic places on earth—Guiyu, China—where millions of tons of hazardous waste has piled up among the already at-risk population. The toxins leaching out of the miles upon miles of mounds of electronic waste are polluting the soils and local water supply, and are polluting the air when local residents burn and “cook” the e-waste in order to retrieve precious metals still inside.¹³ In addition, the increase in CRT imports from other nations (such as the United States) has contributed to elevated blood lead levels found within residents. A study conducted in 2006 found that 82 percent of children in Guiyu had elevated blood lead levels (BLLs) compared to 37 percent of children in the neighboring town of Chendian, China (Huo, Peng, Xu, Zheng, Qiu, Qi, Zhang, Han and Piao, 2007). The study also found correlations between elevated BLLs and age, as

¹³This is done by local, indigent populations with the intent to sell retrieved metals for profit, netting e-waste ‘workers’ the equivalent of around eight dollars a day for their efforts (CBS 60 Minutes, 2008).

well as elevated BLLs and the number of e-waste workshops in close proximity (Huo et al., 2007). According to the Mayo Clinic (2013), elevated BLLs are extremely detrimental to human health, causing both mental and physical developmental problems. At very high levels, lead poisoning can be fatal (ibid, 2013).

International attention has been drawn to the city of Guiyu, exposing the developed world as the primary offender in the pollution of still-developing, disadvantaged areas. A direct link was found between Executive Recycling, Inc. and China, as shipping containers were traced from the firm in Englewood, Colorado to ports in Tacoma, Washington, and then to the ports of Hong Kong, China (near Guiyu) (Basel Action Network, 2011; CBS 60 Minutes, 2008).

Over a period of about 30 months, the Basel Action Network (BAN)¹⁴ followed and photographed shipping containers from loading docks at Executive Recycling, Inc., tracking them primarily into Chinese ports where the e-waste was subsequently processed in ‘deadly, highly polluting operations’ (BAN, 2011: 1). These shipments were in direct violation of the United States RCRA, as Executive Recycling, Inc. failed to file the notification of intent to export with the EPA, and also failed to obtain the consent of the receiving country. BAN alerted both CBS and the EPA to these illegal activities, leading to the special report in 2008 as well as a ‘raid’ on the business by the EPA and the U.S. Immigration and Customs Enforcement (ICE) in 2009 (BAN, 2011). Concurrently, the Government Accountability Office had been conducting a review of the illegal export of waste from the United States, and had also found Executive Recycling, Inc. to be engaging in illegal shipments of CRTs and other hazardous materials (GAO, 2008). In response to the accusations, Executive Recycling, Inc. posted the following statement on their website, denying responsibility:

‘Executive Recycling is a respected and law abiding business that recycles computers and electronic parts in a responsible and lawful way. Our company has reviewed the recent report of the Government Accountability Office (GAO) and the 60 Minutes story on E-Waste and we agree on the dangers of unregulated disposal of electronic and computer waste.

Executive Recycling is well aware of every applicable environmental and export standard and has complied throughout its history with such laws, rules and regulations. Our company takes in tons of computer and electronic products and disposes of them responsibly. Many such items are refurbished and resold. Executive Recycling would not sell anything to any purchaser if it had knowledge that said buyer planned to break the law. However, no business can be responsible for the subsequent improper actions of others who lawfully purchase products from them and hide their intentions to engage in misconduct.

Sadly, Executive Recycling appears now to be the victim of others who have obtained electronic and computer products from our company and then acted irresponsibly. These buyers apparently sought to hide their own misconduct by leaving the impression that their shipment was the responsibility of our company. We have discovered that forged documents (provided by the port authorities) were used to improperly shift blame to us when ER sold the tested working units to a Canadian

¹⁴ The Basel Action Network is a watchdog agency which monitors violations of the Basel Convention and the illegal transference of waste from the global north to the global south.

wholesale buyer. We are currently seeking legal actions against this one wholesale buyer in regards to this report.

Executive Recycling urges the Environmental Protection Agency and the government of the United States and other civilized societies to prepare and enact further laws and regulations to make sure that no individuals or environments are damaged through irresponsible disposal of computer or electronic products. Executive Recycling has cooperated with the Environmental Protection Agency in the past and will continue to do so in an effort to see that humans and the environment are protected' (Executive Recycling, Inc., 2008).¹⁵

Despite their claims of no wrongdoing, the EPA found Executive Recycling, Inc. to be the exporter of record in more than 300 shipping containers leaving the United States between 2005 and 2008; roughly 160 of these containers held a total of 100,000 illegally shipped CRTs¹⁶ (US Immigration and Customs Enforcement, 2012).

In 2011, the United States filed federal charges *for the first time* against a recycler for illegally exporting toxic electronic waste. CEO Brandon Richter and Vice President of Operations Tor Olson of Executive Recycling, Inc. were indicted on multiple charges, including wire and mail fraud, 'failure to file notification of intent to export hazardous waste', 'exportation contrary to law', and 'destruction, alteration, or falsification of records' (BAN, 2011; Gluckman, 2011; United States District Court, 2011). The U.S. Immigration and Customs Enforcement (ICE), Homeland Security Investigations (HSI) and the EPA Criminal Investigation Division handed down the charges on September 17, 2011 following the widely publicized (and award winning) reports by the combined efforts of both the Basel Action Network and CBS's *60 Minutes*. After 30 months of investigations, the cooperating entities had successfully connected Executive Recycling, Inc. to over 300 exports, including the shipment of more than 100,000 toxic CRTs (which generated \$1.8 million in profit for the company) (BAN, 2011; US District Court of Colorado, 2011).

According to the indictment, Richter and Olson 'knowingly devised and intended to devise a scheme to defraud various business and government entities who wanted to dispose of their e-waste' and 'falsely advertised to customers that they would dispose of e-waste in compliance with all local, state and federal laws and regulations' (Gluckman, 2011; US District Court of Colorado, 2011). The indictment further contended that Executive Recycling, Inc. 'falsely represented that they would not send the e-waste overseas and falsified records to thwart investigators' (Gluckman, 2011; US District Court of Colorado, 2011). Though there was general excitement and support from environmentalists regarding the charges, many acknowledged that 'it is just the tip of the iceberg' (Gluckman, 2011:1). Jim Puckett, the Executive Director of BAN stated:

¹⁵ Following the allegations of illegal activity, Executive Recycling, Inc. stopped maintaining their company website in 2008 (later removing this statement as well as other press releases) and has since changed their name to "Techcycle" (<http://www.techcycleus.com/>).

¹⁶ What is important to recognize about these illegal transfers is that Executive Recycling, Inc. profited twice in the process: first, when consumers who wanted to recycle their electronics paid the firm to take them (at an average cost of 15 – 35 dollars per unit), and second, when the shipping container arrived at the importing nation, earning the company an average of 35 dollars per unit (Gibbs et al., 2010).

‘They are but one of hundreds of fake recyclers who sell greenness and responsibility but in fact practice global dumping. This is why we must pass federal legislation prohibiting this activity’ (Gluckman, 2011: 1).

Over a year after the indictment, Executive Recycling, Inc. along with defendants Richter and Olson were convicted in criminal court on December 21, 2012, of six counts of wire fraud, one count of mail fraud, and one count of ‘exportation contrary to law’ (US District Court of Colorado, 2012). Brandon Richter, along with Executive Recycling, Inc. as a firm, was also convicted of U.S.C. Section 1519 ‘Destruction, alteration, or falsification of records in a Federal investigation’ (US District Court of Colorado, 2012). What is perhaps more telling about environmental ‘crime’ regulation in the United States is that neither defendant was convicted of violating 42 U.S.C. Section 6928(d)(4): ‘Failure to file notification of intent to export hazardous waste’ under the EPA and RCRA regulations¹⁷ (United States District Court of Colorado, 2012). From the perspective of e-waste regulators and activists, this was a tremendous disappointment; this charge was arguably the most important, as the ‘CRT rule’ is a major pillar in current U.S. hazardous waste regulation which is routinely circumvented.

Sentencing is scheduled for April of 2013, with each defendant facing decades in prison, and over one million in fines (US District Court of Colorado, 2011). The corporation itself, though unable to garner prison time, is also facing over one million in fines. If history serves as precedent, it is unlikely that the respective parties will be sentenced to a penalty even close to the maximum. O’Hear (2004) alleges that a primary aspect of environmental prosecution is inconsistency, which offers little incentive for big business to follow environmental regulations. To illustrate, O’Hear (2004) highlights that sentences are not routine, nor are they handed down consistently. Regardless, these sentences are by no means as severe in their penalties as they could be, as ‘few environmental defendants of *any* type go to prison’ (O’Hear, 2004: 136, italics original). Lack of regulation, combined with lax enforcement of what few regulatory measures are provided, clearly fails to coerce corporations or individuals to participate in the safe disposal of hazardous waste. A guilty verdict in the case of Executive Recycling and its CEOs demonstrates that the authorities in the United States are beginning to take environmental crime more seriously. However, “how serious” they are about preventing future environmental regulatory violations will be evidenced by the sentences that are eventually handed down.¹⁸

Discussion and Conclusion

Much change has occurred in the market of waste following WWII, including a change in the ‘waste’ itself, as new chemicals and other toxins (such as CRTs) began to be used in a variety of products (White, 2011) and were eventually regulated in industrialized nations. What has not evolved swiftly enough with technology is legislation to regulate and enforce it. Though the Basel Convention is significant in international regulation, it contains multiple loopholes that allow for the export of e-waste under the guise of ‘recycling,’ and has yet to be ratified by a primary contributor to the e-waste stream, the United States. What little legislation exists in the United States to regulate hazardous waste under the RCRA is poorly enforced and as evidenced by the Government Accountability Office Report (GAO, 2008) fails to serve as an effective deterrent. Although the conviction of Executive Recycling, Inc. is a victory in the

¹⁷ Executive Recycling, Inc. as an entity was convicted on this count (US District Court of Colorado, 2012).

¹⁸ Following an evidentiary hearing on April 3rd, 2013, to determine the amount of ‘loss’ attributable to the defendants’ fraud, sentencing was initially scheduled for April 29th, 2013. The scheduled sentencing hearings have since been vacated, awaiting the filing of objections from both parties; U.S. District Court Judge William Martinez has yet to reschedule sentencing hearings for the defendants (US District Court of Colorado, 2013).

effort to stop the illegal transfer of waste, it was the first time the U.S. federal government had taken legal action against an electronics recycling firm. To compound this, the charges that were actually filed against the guilty individuals did not pertain to the specific environmental offenses, which only further serves to 'decriminalize' environmental crime. What is arguably more important than the conviction is the sentencing—in light of the historically lenient sentencing of environmental criminals in the United States, this decision has the opportunity to establish new precedent and perhaps serve as a more threatening deterrent to would-be violators.

While it is recognized that current legislation is not up to par, it must also be noted that modifying policy alone will not solve the problem—enforcement must also be increased to implement these policies. As of October, 2011 in the United States, the EPA's Criminal Enforcement Program in total employed 375 individuals; only 215¹⁹ of these were actual criminal investigators (Office of Criminal Enforcement, 2011). These roughly 200 individuals (depending on the year) follow up on the thousands of 'leads' the EPA receives annually and investigates the roughly 800 cases the EPA Criminal Enforcement Program handles at any one time (US EPA Criminal Enforcement Program, 2012). All of this must be accomplished on an annual budget of around \$65 million per year (Office of Criminal Enforcement, 2011). If the US government is relying on deterrence to dissuade would-be offenders, an increase in the staffing and enforcement capabilities of the Criminal Enforcement Program will need to be significantly increased, as will the annual budget.

The market of electronic waste has only grown, and will continue to grow, over time. Feeding off ever-expanding levels of technology and consumption, e-waste brokers consistently have "new" products to sell. Ironically, without environmental regulations, electronic waste would not be nearly as marketable. The practice of 'greenwashing' by corporations has promoted both the development of 'environmentally friendly' products as well as an 'environmentally friendly' disposal process. By marketing themselves as 'green,' corporations attract consumers and generate profits, and yet have no accountability for these claims. What irresponsible electronics recyclers may respond to more than federal regulations is bad press, suggesting that the development of a governmental program for e-Stewardship could prove more effective than actual environmental legislation. Pressure from environmental organizations and even consumers for responsible manufacturing and recycling may also prove effective at curtailing illegal shipment of e-waste through consumer purchasing practices. This would pass a portion of the responsibility onto both producers and consumers, encouraging them to choose products and disposal companies based on verified e-Stewardship ratings.

As previously discussed in the review of e-waste legislation, the United States trails far behind other core nations in its regulation of disposed electronics in multiple ways. One of the major differences between the U.S. and the EU that merits another look are the 'take-back' policies that require electronics producers to 'take back' their products when consumers are ready to dispose of them. The European Union has implemented the Waste from Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC which established producer take-back policies across Europe. These policies are based on the idea of Extended Producer Responsibility (EPR), which holds producers liable for the post-use collection,

¹⁹ In spite of the fact that EPA regulations require a minimum of 200 criminal investigators on staff at all times, this number dipped below 200 eight different times between 1999 - 2011, reaching as low as 168 criminal investigators in 2007 (Office of Criminal Enforcement, 2011).

recycling and disposal of their products (Gui, Atasu, Ergun, and Toktay, 2013). The objective of these policies is to:

‘...promote environmental impact reduction at end of life by (i) making manufacturers internalize the end-of-life costs of their products so as to incentivize the design of products that are more recyclable and have lower toxicity; and (ii) to ensure there is sufficient and stable financing for running a collection and recycling system for post-use products’ (Gui *et al.*, 2013: 262).

The intention of such an initiative is twofold, as it seeks to both encourage more environmentally friendly products, as well as to provide for their responsible recycling when products are no longer in use. While EPR policies are used and enforced on not just national but international levels in other core nations, the U.S. has no unified federal EPR policies, and practices producer take-back in only half of its states. As of August, 2012, twenty five states had adopted e-waste regulatory laws (Gui *et al.*, 2013), of which 22 are based on EPR policies (Atasu and Van Wassenhove, 2012).

State laws across the U.S. on EPR are already more narrow than both the EU’s WEEE directive and similar programs in Japan. In the U.S., regulations are limited to TVs, monitors and IT products, and are more ‘flexible’ in both production and disposal practices than international laws (Gui *et al.*, 2013). To make matters more confusing, individual state policies vary across the nation, with some charging both the consumer and the producer during the take-back phase, and others “building in” the take-back cost during the production process through state taxes. Furthermore, most states do not implement a “market share” for the take-back of products as the EU does—instead, they use return-share values based upon how many of “their” products were returned:

A dominant policy choice in the U.S. appears to be mandating producer responsibility (with the exception of California). Although producers are technically allowed to operate individual producer operated systems, collection systems are common in the US, where producers pay average collection and recycling costs per volume of e-waste to a state-operated plan. An important difference is that producer cost sharing based on return shares is more common in the US, while in Europe market share based cost allocation models are favored. Unlike market share models, producers under the return share models do not pay proportional to their sales volume but rather proportional to their collected product volumes....while the choice between return share and market share based cost allocations seems to be trivial, this is one of the most crucial issues in practice. Companies with lower return volumes do not want to share costs with companies that have higher return volumes (Gui, Atasu, Ergun, and Toktay, 2012: 12).

Not only are current take-back practices in the U.S. jumbled and confusing, but they also seem to favor big businesses over smaller ones. It is no surprise that corporations would want to push back against legislation that may cost them money, and it is even less surprising that they would be opposed to the legislation if it disproportionately affects their bottom line. Multiple, conflicting stakeholder perspectives have impacted the implementation and shape of current EPR policies in the United States (Gui *et al.* 2012), and have also played a role in preventing a unified federal policy.

Within the United States (and other industrialized nations), costs to electronics recyclers are driven up primarily by the state and federal environmental regulations they must follow. As aforementioned, the RCRA governs hazardous and toxic waste treatment and provides specific criteria for the transport, treatment, storage and disposal of said waste. Products containing these hazardous or toxic materials cannot legally be disposed of in landfills, rendering them immediately more expensive to handle and process in the United States. Given that most other industrialized nations have adopted take-back and producer-responsibility programs for discarded electronics, it is important to contemplate why the United States is so far behind in its practices. It has been suggested that government regulation of illegal e-waste shipments is lacking because of powerful lobbying groups which seek to dissuade increased legislation—mainly from producers and stakeholders (Atasu and Van Wassenhove, 2012). While twenty-five individual states have adopted their own take-policies, the U.S. lacks one federal, unified practice for the organized collection and recycling of e-waste. Barbara Kyle of the Electronics Take Back Coalition believes a bill would do nothing to close the ‘huge loophole’ that already exists in the industry, permitting recyclers to export e-waste illegally (Frontline, 2009):

‘Rick Goss, with the Information Technology Industry Council (ITI), a powerful lobbying group representing the high tech industry, doubts that any federal law on e-waste will pass this year. He told the electronics trade association IPC in February [2011] that there is little accord between computer and electronics companies or retailers and recyclers about how to shape legislation. “Members of Congress are clear that they don’t have the appetite or the time to try to negotiate an outcome,” Goss said’ (Bennion, 2011).

Perhaps this lack of ‘appetite’ stems from hundreds of thousands of dollars spent on Congress from influential lobbying groups. For example, the Institute of Scrap Recycling Industries (ISRI) spent \$120,000 to hire the Podesta Group in the fourth quarter of 2011 (which is the same lobbying firm it had hired in the previous quarter for \$110,000) to ‘push back against the Responsible Electronics Recycling Act’²⁰ (Resource Recycling, 2012). The Institute of Scrap Recycling Industries was not only lobbying against the Responsible Electronics Recycling Act, but also provisions of the RCRA and TSCA. Scott Horne, the president of ISRI, made contact with federal officials to discuss EPA regulations on CFCs as well as the ‘application of voluntary operational standards for electronics recyclers’ (Resource Recycling, 2012).

The Waste Management Corporation of Houston, Texas spent \$30,000 on lobbying firm Bracewell & Giuliani, LLP to influence not only e-waste legislation, but also other policies on taxes, climate change, and waste-to-energy (ibid, 2012). The Glass Packaging Institute shelled out over \$30,000 for Pace, LLP lobbying firm in order to lobby congress on energy issues, greenhouse gas emissions regulations, and extended producer responsibility programs for producers (ibid, 2012). Lobbying against international e-waste trade restrictions, the National Solid Wastes Management Association spent \$10,000 to employ lobbyist Richard Goodstein, whom it had also employed for the same amount in the previous quarter (ibid, 2012). And lastly, the Consumer Electronics Association spent over \$200,000 in the second half of 2011 on multiple lobbying firms focusing on the Responsible Electronics Recycling

²⁰ The Responsible Electronics Recycling Act is a Bill in the House of Representatives that was introduced in June of 2011. If passed, the Bill will establish policies banning the export of electronic waste from the United States. Currently, the Bill has been referred to a Committee and has not advanced any further (112th Congress, 2011).

Act (ibid, 2012). All tallied, over \$630,000 was spent on lobbyists for the purpose of deflecting the Responsible Electronics Recycling Act in the second half of 2011 alone. It is clear that there is a lot of money at stake should the Act pass, and these corporations are willing to spend now in order to profit later. Thus far, the wheels of government seem to have been effectively slowed by the political economy of the industry.

Again, from a business perspective, the decision to transfer electronic waste into an un- or under-regulated nation is perfectly cogent; not only does the shipping company avoid the costly recycling process in their home nation, but they also stand to make multiple profits from their efforts. This process, however, involves the transfer of more than just electronics—it also involves the transfer of harm. As aforementioned, White (2011) argues that the transnational movement of waste (including e-waste) is actually a process of ‘externalizing harm.’ This harm can occur in one or both of two ways, and in both instances directly affects marginalized populations, evoking extreme issues of environmental justice. The first process in which harm is externalized is through the point of production, meaning the location in which production occurs will inevitably experience the environmental harms associated with raw material retrieval and large scale manufacture (pollution of air, water, soil, etc.) as well as the social harms (poor wages, unsafe working conditions, etc.). White (2011) also articulates that waste production is inevitably associated with growth:

‘Built into the logic and dynamics of capitalism is the imperative to expand. Capitalism is always searching for the things which can be transformed from simple use-values (i.e. objects of need) into exchange values (i.e. commodities produced for exchange)’ (ibid, 2011: 73).

In a capitalistic structure, production and destruction are interlinked, as waste becomes both a by-product of production and the refuse from leftover consumption (White, 2011). In this way, harm becomes a cumulative impact as the market for electronic goods and electronic waste expands. What is worthy of note regarding the e-waste market is that it is cyclical: first, production occurs in developing nations, exposing these populations to the environmental harms of large-scale industrialization and pollution; consumption happens second, where populations in developed nations stand to enjoy the benefits of these products; when the product has reached its end-of-life stage, or EOL, it often then returns to the developing world for disposal, which will inevitably re-impact the environment and surrounding populations, completing the transference of harm.

As the production, consumption, and disposal of electronic goods is unlikely to decline in the near future, a combination of efforts is needed in order to dissuade corporate environmental crime regarding the transfer of electronic waste in the United States. First, immediate increased enforcement of current regulations under the RCRA should be implemented, as research has demonstrated that current enforcement is beyond inadequate. Secondly, in the immediate future, passage of the Responsible Electronics Recycling Act and the ratification of the Basel Convention would be significant ‘first steps’ in reducing the export of e-waste from the United States, as these actions will not be ‘illegal’ unless we define them as such. Thirdly, both producers and consumers need to play an active role in responsible recycling as well. Passage of a unified Extended Producer Responsibility policy across the nation and the development of additional e-Steward programs would serve to redirect e-waste into appropriate and (ideally) more environmentally sound recycling facilities. Consumers can further these efforts by demanding better practices from corporations during both production and disposal processes. And lastly, awareness on the issue needs to increase, in all regions of

the world. It should be acknowledged that although even these tenets combined cannot (and will not) stop the illegal market of e-waste nor the transference of harm from the global north to the global south, they can serve to reduce or mitigate the impact.

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Cleaning Up Greenwash: The Case for Enforcing Corporate Environmental Responsibility

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Abstract:

Corporate Social Responsibility provides a means through which corporations can establish their green credentials, reassuring consumers and government that the corporation takes its social and environmental responsibilities seriously. But debates persist concerning the best means to ensure that corporate and wider community interests are harmonised and integrated into corporations' operational practices. Voluntary action and corporate ethical policies are often promoted as the best mechanism through which to achieve corporate social responsibility. However, voluntary codes of practice and self-regulation regularly fail where they conflict with the drive for success and profitability or where the costs of true compliance are too high. Where self-regulation fails the consequences for the environment can be severe.

While many corporations may embrace the concepts of social and environmental responsibility there are numerous examples of corporations who claim to act in a sustainable and responsible way while at the same time showing disregard for the communities in which they operate and causing considerable environmental damage. This paper argues that responsibility for environmental damage is both a corporate and social responsibility and should be the subject of regulation to ensure corporate responsibility for environmental damage.

Keywords : CSR, CER, environmental crime, pollution, ethical standards, social justice, Polluter pays

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Introduction

Green criminology identifies that corporate environmental crimes' 'often eclipse the scope and reach of the criminal law' (Sollund, 2012:3). The global operations of Multi National (business) Entities (MNEs) can have significant negative consequences for the communities in which they operate and the wider environment yet are often legal given the relative lack of regulation for corporate practice in relation to environmental harm. While business' may in principle embrace the concept of ethical operations and human rights compliance claiming to implement these in their Corporate Social Responsibility (CSR) policies, the extent to which they do so, the content of these policies and their applicability to the concept of environmental compliance varies considerably. There has been widespread adoption of CSR policies by businesses in developed countries in the last 20 years, yet business activities are often not subject to international law or human rights norms. As a result CSR is largely voluntary and while CSR and Corporate Environmental Responsibility (CER) are routinely embraced by business, the question remains as to what extent this is just business proclaiming what people expect it to do while at the same time continuing to act either illegally or through Corporate Social Responsibility and public relations (PR) discourse attempt to downplay the harm caused by business practices.

This paper argues that responsibility for environmental damage is both a corporate and social responsibility and should be the subject of regulation to ensure corporate responsibility for environmental damage. Many major corporations such as Shell, BP etc. have good Corporate Environmental Responsibility policies on paper but continue to commit environmentally damaging (and sometimes criminal) acts. Thus the issues for green criminology to consider is how should good standards of CER be enforced and whether this solely consists of defining what is legal or illegal or requires going further to include regulated standards of behaviour and expectations of corporate behaviour that the public will accept as ethical compliance. This paper argues for regulated compliance to address the multiple failings of the current largely voluntary regime.

The Nature of Corporate Environmental Responsibility

Corporate Social Responsibility²² policies can be integrated into a business model that theoretically provides for adherence to the law, ethical standards and international norms of business behaviour and accountability. CSR provides a means for corporations to promote their brand as ethically and socially responsible and operates mainly on the basis of self-regulation, where corporations are trusted to voluntarily adhere to non-legally binding standards of ethical behaviour, with no single commonly accepted definition of the principle (Mazurkiewicz, 2002). Generally 'every corporation has a policy concerning CSR and produces an annual report detailing its activity' (Crowther and Aras, 2008:10), yet the central problem in assessing appropriate standards of CER is that a range of approaches to CER (within the broad CSR framework) exist and thus the effectiveness of CER and the extent to which corporations integrate CER into their practices as a tool to minimise environmental harm varies.

²² From this point on, the abbreviation CSR will be used when referring to general Corporate Social Responsibility (CSR) or sustainability policies and reporting while the abbreviation CER will be used when referring to specific environmental responsibilities and Corporate Environmental Responsibility reporting.

The reality is that currently corporate adoption of ethical and environmentally responsible principles operates in a regulatory structure lacking in relevant international or national law. The United Nations created the Global Compact (GC) 2000 which incorporates 10 norms on environmental sustainability and anti-corruption in business. This initiative employs principles derived from the Universal Declaration of Human Rights, the Fundamental Principles on Rights at Work (provided by the International Labour Organization), the Rio Declaration on Environment and Development and the UN Convention against Corruption. The UN has also produced Draft Norms on the Responsibilities of Transnational Corporations and other Business Enterprises 2003 which incorporates model guidelines and voluntary self-imposed corporate codes provided by trade unions and NGOs. While these and other corporate guidelines exist they are largely voluntary and MNEs are not required to comply with any of these largely advisory guidelines. In addition these standards are not routinely incorporated into legal systems and are thus not legally enforceable, instead they are monitored through voluntary international frameworks such as the Global Reporting Initiative (GRI), an international reporting standard for corporations to use when reporting on the economic environmental and social impacts of their business, or Social Accountability International (SAI) a voluntary auditing standard which monitors whether codes of conduct are being met. Auditing of compliance with the standards is also largely voluntary and divorced from criminal enforcement. Corporations may thus choose which standards to adopt and even when adopting one of the accepted initiatives like the GRI, corporations can construct their own environmental compliance narrative giving the impression of achieving a quality mark which in reality may not be the case (Baker, 2012).

Harris (2011) highlights that corporations may adopt CSR/CER for a variety of reasons, principally:

1. Acting ethically is the right way for the company to behave
2. Doing what is right and fair is expected of an organisation
3. Acting ethically is in the organisation's best interests.

(Harris, 2011:39)

The extent to which one (or all) of these reasons applies and provides the corporation's motivation for integrating CER can have an effect on whether CER is adopted as part of operational practices, ensuring that the corporation considers the impact and wider implications of its activities, or whether CER becomes solely an aspect of marketing and brand management or simply a PR tool. The need to combat negative publicity or damaging perceptions of a corporation and its valuable brand may, for example, lead to the adoption of CER purely to obtain benefits for a MNE's public image. There may even be inconsistency within a MNE about the extent to which CER should be observed or apply to its operations, especially where there is no clear chain of CER ownership at board (strategic) level and CER reporting is outside of core corporate governance, external scrutiny or stakeholder audit. Thus while some MNEs may engage with CER as an integral part of their corporate practices and regulatory auditing, others may only superficially engage with CER. An organisation's reporting of environmental compliance and its adoption of CER strategies are immaterial if the strategies are not adhered to in practice and make no impact on decision-making. The validity of CER policies can also be questioned if CER is in conflict with operational practices that prioritize profit over environmental law compliance whether overtly or by implication. Voluntarism thus fails in part because CER might be adopted to suit the needs of a corporation's stakeholders or the development and protection of its brand, rather than being

adopted as part of an ethical operating strategy that minimises the impact on communities affected by their actions. But it may also fail because of the lack of an enforceable, independently verified CER standard against which an organisation's performance and the accuracy of its reporting can be assessed. Thus CER voluntarism by itself may be inadequate and legal controls may be required to enforce CER although this can itself be problematic.

The core principles of CER are accountability; transparency and sustainability. But while corporations may publicly claim to be acting ethically and in a socially responsible manner, green criminology has documented the persistent nature of law-breaking in respect of pollution, disposal of toxic waste and misuse of environmental resources (Pearce and Tombs, 1998). It has also challenged corporate definitions of good environmental practice and provided a means through which corporate wrong doing can frequently be considered as deliberate criminal acts (Lynch and Stretesky, 2003). In addition, Crowther and Aras (2008) argue that corporations do not truly account for the environmental impact of their activities so that externalities are routinely excluded from corporate accounting with the true costs of corporate environmental damage being met by communities. Corporations may thus add 'misleading the public' or fraud to their environmental activities through poor or negligent corporate environmental reporting.

Corporate directors already have a number of incentives to align their behaviour with accepted standards and routinely claim to be operating responsibly, taking account of the needs of communities. Alcock and Conde (2005) argue that further legislation to regulate responsible corporate behaviour is unnecessary, but numerous cases highlight the failure of corporations to remedy the harm they have caused (see for example persistent pollution incidents at Shell's Deer Park refinery 2003 to 2007 discussed later in this article) suggesting the failure of self-regulation and voluntary compliance with ethical standards. Using research & perspectives on corporate governance; environmental law & regulatory justice this paper therefore argues that corporate environmental damage should be the subject of regulatory restorative justice, in effect forcing corporations to comply with a set of CER principles. The 'polluter pays' principle should be a core feature of the law, enforcement and regulatory action to ensure that corporations take (private) responsibility for and remedy their environmental damage.

Defining Corporate Environmental Responsibility and Environmental Damage

While a range of activities that cause harm to the environment are subject to national and international law, there is no single definition of environmental damage for which corporations should be held responsible. In addition to the definitions contained within specific legislation, the social legal perspective argues that some acts, especially by corporations, 'may not violate the criminal law yet are so violent in their expression or harmful in their effects to merit definition as crimes' (Situ and Emmons, 2000:3). In effect:

The social legalist approach focuses on the construction of crime definitions by various segments of society and the political process by which some gain ascendancy, becoming embodied in the law. The strict legalist approach, without denying this dynamic emphasizes these final legal definitions of crime as the starting point of any analysis because they bind the justice system in its work.

(Situ and Emmons, 2000)

While the environmental (and criminal) justice system focuses solely on those acts that are prohibited by legislation, definitions of environmental crime and corporate liability for these acts also needs to consider how criminal acts manifest themselves and consider those acts not yet defined as crimes but which go against the norms of society. Lynch and Stretesky explain that from an environmental justice perspective a green crime is an act that '(1) may or may not violate existing rules and environmental regulations; (2) has identifiable environmental damage outcomes; and (3) originated in human action' (2003:227). They explain that while some green 'crimes' may not contravene any existing law, where they result in or possess the potential for causing environmental and human harm, they should be considered to be crimes. In relation to CER; this requires a corporation to consider not just minimum legal standards but also the extent to which it may need to go beyond basic compliance and engage with communities and other stakeholders. White (2012) identifies that 'much environmental harm is intrinsically transnational' (2012: 15) and is by its very nature mobile and easily subject to transference. He further argues that 'the systemic causal chains that underpin much environmental harm are located at the level of the global political economy' (White, 2012:15). Thus the global reach of MNEs is situated within international markets and systems of production, requiring a system of understanding and addressing environmental harm that incorporates appreciation of its international dimensions (Beirne and South, 2007). However business activities are often not subject to international law or human rights norms designed to enforce environmental rights and thus there is some confusion over precisely what legal norms apply to a corporation's activities and over the precise CER policies or standards they should observe. Harvard Professor John Ruggie (Special Representative to the UN Human Rights Council) identified that 'the failure to enforce existing laws that directly or indirectly regulate business respect for human rights is often a significant legal gap in state practice' (UNHRC, 2012:8). Thus not only is judging appropriate standards of corporate behaviour problematic but so too is enforcing such standards and remedying environmental/human rights problems caused by corporations. Business activity that harms or impacts on the environmental rights of communities is subject to a mixture of voluntary compliance, regulatory activity and victim litigation primarily driven by national legislation.

Mazurkiewicz (2002:6) explained that by 2002 there had been 'over 300 CSR codes, principles performance standards, management standards developed by governments, business associations, or academia' and also a wide range of individual companies codes of conduct or different reporting mechanisms or initiatives. While international initiatives like the GRI have become widely recognised, the challenge for monitors, consumers and other stakeholders is to know the standard by which companies should be held to account, a problem complicated by the lack of an absolute CER standard agreed upon by NGOs and corporations, and by MNEs adopting and promoting different CER perspectives dependent upon the industry and legal/regulatory environment. Research by a network of Canadian environmental NGOS (ENGOS) concluded that 'ENGOS view environmental commitment and awareness as key components of CER but expressed difficulty in discerning genuine environmental commitment from public relations exercises bordering on green wash' (2005: iv). Where CER is a fringe policy issue within a MNE it may amount to little more than a PR exercise. The ENGOS concluded, however, that the following key components were essential in achieving CER:

1. Environmental commitment and awareness
2. Stakeholder engagement

3. Measuring, reporting and auditing
4. Transparency
5. Commitment to continuous improvement
6. Going beyond compliance

However while corporations might easily put in place some form of measuring, reporting and auditing and include this in CSR or CER policies and annual reports; engagement with stakeholders and going beyond basic compliance presents difficulties for all but the most environmentally conscious corporations. Situ and Emmons (2000) argue that corporate environmental crime is 'a product of motivation and opportunity conditioned by the quality of law enforcement' (2000:67). While this is not to suggest that all corporations are predisposed towards environmental crime; when the drive for corporate success (in terms of greater profits or lower costs) greatly exceeds the legitimate or profitable means for achieving it, the 'structural groundwork for motivation is laid' (2000:67). Where this is combined with opportunity and a weak regulatory structure, corporations fearful of decreasing profits or increasing costs may seek to circumvent environmental legislation even while publicly making pronouncements of environmental responsibility. Where corporations may be dealing with multiple environmental performance demands and expectations from stakeholders and investors, the requirement to set protection and restoration of the environment as a strategic priority may result in a conflict between the interests of the corporation, environmental interests and those of the wider community. The Australian Senate Standing Committee on Legal and Constitutional Affairs (1989) summarised the potential conflict as follows:

To require directors to take into account the interests of a company's employees, its creditors, its customers or the environment, as well as its shareholders, would be to require them to balance out what would on occasion be conflicting forces. To make it optional for directors to take into account the interests of a company's employees, its creditors, its customers, or the environment, as well as its shareholders, again would mean that directors would be in the position of weighing up the various factors. It would also limit the enforceability of shareholders' rights if directors were able to argue that, in making a certain decision; they had been exercising their option to prefer other interests.

(Senate Standing Committee on Legal and Constitutional Affairs, 1989).

This potential conflict and a belief that corporate norms and the natural drive of corporations to behave ethically and responsibly will automatically provide for effective self-regulation, are at the heart of movements to resist further regulation of CSR and CER. Yet while the concept of CSR is still evolving and there is no globally-accepted definition of CSR (Kercher, 2007) there is evidence that even corporations that actively promote themselves as engaging with communities and being ethically responsible still cause significant harms to the environment. Seemingly, self-regulation and voluntary compliance with the norms of corporate behaviour and ethical business practices is not working.

Failures in Voluntary Compliance

Situ and Emmons (2000) identify that environmental crime is predominantly a civil matter; in other words fines and administrative penalties are the main technique for dealing with environmental crime rather than rigorous criminal justice enforcement. The reason given for this is the lack of effective international law and instead reliance on state (national) legislators to define environmental crime according to the requirements of national criminal or civil justice codes. The result is often that it is not seen as a priority criminal justice issue and often falls outside of the remit of the main criminal justice agencies.

However, there are a number of international environmental Conventions, mechanisms put in place to require states to provide for effective environmental protection. Voiculescu and Yanacopulos (2011) identify the United Nations (UN) as being at the forefront of devising universally acceptable standards to embed 'respect for human rights norms and abstention from corrupt practices' into business and transnational corporations' operating practices (2012:4). Their observation is based on the idea that much environmental damage is committed by corporations falling outside the remit of much criminal law as in reality countries have different laws and 'frequently quite different approaches to dealing with environmental crime' (White, 2007:184). Environmental crime is also not always dealt with by police or criminal justice agencies and in many countries falls within the jurisdiction of the enforcement arm of the state environment department, rather than being integrated into mainstream criminal justice. Indeed some jurisdictions do not provide for corporate criminal liability within their justice systems. As a result, CER becomes a matter of voluntary compliance and in practice is often enforced primarily by NGOs (Nurse, 2013). Yet voluntary compliance with good standards of CSR and CER is often dependent on; the composition of a corporation's board, the extent to which it is willing to comply with good standards, and the size and power of that corporation. Friedman theorised that the main responsibility of the corporate executive is 'to make as much money as possible while conforming to the basic rules of the society' (Friedman, 1970). Crowhurst (2006) identified that while responsible industry usually welcomes certainty in environmental legislation and clarity in CER there are corporations that actively seek to avoid 'costly' legislation. Global corporations which produce harmful environmental effects and who have the economic power to do so deliberately, invest in 'pollution havens' (countries with low levels of environmental regulation) so that as standards of environmental liability become stricter in the EU and other western countries global companies move their investments and harmful environmental activities out of the reach of the tougher regulatory systems.²³

However, the failure of self-regulation can be found where multinational corporations pursue profit without regard to relevant CSR/CER matters (Kercher, 2007) and dispute the extent of the environmental damage they cause or the measures required to resolve the damage. Examples include:

- General Electric's (GE) failure to clean up the Hudson River (2002 to 2006) after contaminating it with organic pollutants and it's attempts to delay the

²³ 'Balancing the Needs of Business with those of the Human Race' (2001) 20 IFL Rev, Supp (Environment lawyers), 7-15. Comment by panel member John Emmerig, Blake Dawson Waldron, Canberra responding to the question 'Environmental legislation is increasing in all jurisdictions. What effect is this having on trade and industry around the world?'

implementation of the cleanup program and challenge the legitimacy of the regulator's decision.

- Shell's joint venture with the Nigerian government where, in 1995, Ken Saro-Wiwa and eight others were executed following their non-violent campaign against environmental damage associated with the operations and the company's more than one thousand instances of illegal pollution at its US Deer Park refinery and chemical plant resulting in a 2008 law suit against the company.
- The BP-led OCENSA consortium's devastation of the lives and land of 60 farmers in Colombia during the construction of an oil pipeline over their lands despite their objections. The construction of the BP pipeline ruined a way of life enjoyed by Columbian farmers for generations (Leigh Day and Co, 2005).
- Despite being prosecuted by the Environment Agency numerous times for offences relating to chemical problems at sewage treatment plants, UK utility company Thames Water polluted the River Wandle in September 2007 with industrial strength chlorine resulting in a 5km stretch of contaminated water, the bleaching of most of the local green vegetation and the death of around two tonnes of fish. The pollution effectively wiped out 20 years of restoration work at the River (BBC News 2010).

When CSR and CER fails, regulators and the criminal justice system may be required to address environmental problems. However even where companies are prosecuted for environmental damage this may not resolve the issue.

Justice Delayed: GE and the Hudson River

The GE (Hudson River) case demonstrates how self-regulation fails where different perspectives held by corporations and regulators impact on effective resolution of environmental complaints. During an approximately 30-year period ending in 1977, GE used polychlorinated biphenyls (PCBs) in its capacitor manufacturing operations at its Hudson Falls and Fort Edward, New York facilities. PCB oils from the plants (permitted and non-permitted) were discharged directly and indirectly into the Hudson River. Even after GE received a permit in 1975 for some discharges it exceeded the permitted limits.

In 1975 the New York State Department of Health (NYSDOH) began to issue health advisories recommending that people limit their consumption of fish from the Hudson River, and in 1976 a ban was issued on all Hudson River fishing (from Hudson Falls to the Federal Dam at Troy) due to the potential risks from consuming PCB-Contaminated fish. PCBs are considered to be a possible carcinogen or cause other health problems (Johnson *et al.*, 1999). The US Federal government banned the pollutants in 1977 and a ban on most commercial fishing in the area was supplemented with catch-and-release fishing restrictions in 1995. In 1984 the US Environmental Protection Agency (EPA) completed a feasibility study and in February 2002, the EPA decided that GE's PCB's posed a public health and environmental threat and should be dredged up from 40 miles of the Hudson River (Environmental Protection Agency, 2002). GE opposed the EPA plan arguing that dredging would stir up the pollutants and cause them to flow downstream, embarking on a 'huge advertising and

lobbying campaign to weaken the plan' (CBC News, 2001). Three years after the EPA decision, GE was reported to be dragging its feet on the cleanup (Sullivan and Schiavo, 2005) while at the same time promoting itself as a company that cared about the environment via its 'ecomagination' initiative of environmentally friendly technology. The company had allegedly hidden behind a 'veil of cooperation' doing the minimum that regulators asked for while at the same time disputing the EPA's decision, seeking legal means through which to challenge it and delaying the start of the cleanup which was initially pushed back from 2005 to 2006. The company challenged the cleanup plan in federal court 'trying to strip the government of its authority to order companies to deal with hazardous waste' (Sullivan and Schiavo, 2005). Rather than accepting liability for the harm once found culpable, GE's behaviour typified aspects of Sykes and Matza's (1957) neutralization theory; the company denied responsibility, contested the legitimacy of the enforcer and refuted the necessity of legal action.

Ineffective Justice: Shell and the Deer Park Refinery

As Situ and Emmons (2000) identify, weak environmental law enforcement allows corporate environmental crime particularly within competitive markets where the benefits of non-compliance may significantly outweigh the limited risk of detection and apprehension. While this is not to suggest that all corporations are predisposed towards environmental crime Heckenberg (2010) identifies that global environmental harm is part of a complex process of transference which can be 'externalised from producers and consumers in ways that make it disappear from their sight and oversight' (White, 2012:21). Movement of environmentally damaging products within global markets becomes difficult to police, especially given disputes over what is defined as environmentally harmful and what gets defined as a crime (White, 2012:22). Thus, as Doyon alludes to in her article earlier in this collection, corporations seeking to maximise profits and minimise costs within lucrative global markets subject to ineffective laws and weak regulatory structures may seek to circumvent environmental legislation even while publicly making pronouncements of environmental responsibility.

Deer Park, Texas, is home to a Shell chemical plant, one of the largest oil refineries in the US and which has been the subject of numerous environmental violations primarily of the (US) Clean Air Act 1970. For example, in June 1997 an ethylene explosion at the plant was heard and felt up to 25 miles away. In 2008 environmental organisation the Sierra Club filed a federal lawsuit against the Shell Oil Company and its subsidiaries over an estimated 1,000 incidents of pollution between 2003 and 2007 at Shell's Deer Park refinery and chemical plant. The pollution levels at the plant exceeded the levels allowed under permits issued by Texas regulators, amounting to a total of five million pounds of air pollutants into the atmosphere, 'including toxic chemicals like benzene and 1,3-butadiene, as well as sulfur dioxide and oxides of nitrogen' (Mouawad, 2009). Although Shell had been cited by regulators and had paid fines for some of the incidents, its failure to take any action over the pollution at the plant led to the Sierra Club and Environment Texas initiating the lawsuit to force enforcement of the Clean Air Act's provisions. Joshua Kratka of the National Environment Law Center (representing the Sierra Club and Environment Texas) stated that Shell was paying to pollute alleging that 'Shell is factoring these fines into its costs of operating these facilities' (Seba, 2008). Connelly and Smith (1999) suggest that collective action is often the necessary solution to environmental problems where civil action can be

used to seek a remedy in ways that criminal action often fails to. The failures in formal (state) enforcement action in Texas required citizen groups to sue to stop illegal air emissions arising from so-called 'upset' events: equipment breakdowns, malfunctions, and other non-routine occurrences. Luke Metzger, Director of Environment Texas explained that 'despite repeat violation notices and fines, the Texas Commission on Environmental Quality never got to the root of the problems at Shell Deer Park' (Environmental Texas/Sierra Club, 2009). The lawsuit was subject to a settlement agreement in April 2009 requiring Shell to remedy the faulty processes at the plant which were causing pollution problems and to pay a civil penalty which would be used for further environmental measures (see below).

Reparation for Environmental Damage

The use of the 'polluter pays' principle for environmental damage was adopted by the OECD in 1972 as a background economic principle for environmental policy (Turner, 1992). By making goods and services reflect their total cost, including the cost of all the resources used, the principle required polluters to integrate (or internalise) the cost of use or degradation of environmental resources. However, environmental damage is not solely an issue of cost and increasingly legislators, regulators and the courts apply the basic principles of restorative justice which include the 'repair of harm' principle and mediation or contact between victim and offender as tools to remedy or mitigate corporate environmental damage.

The ideal for effective restorative justice is that offenders are held to account for what they have done and realise the harm that they have caused. Successful restorative justice also avoids the escalation of legal justice and its associated costs and delays (Marshall 1999). Applied to environmental damage restorative justice provides for legal enforcement of CER and moves beyond the general criminal law approach of punishment to embrace civil law's focus on remedying injustice such as environmental harm.

The settlement negotiated by Shell in relation to the Deer Park pollution provides a model for negotiated settlements using restorative principles. The settlement requires Shell to; reduce emissions from air pollutants from its plant by 80 percent within three years, upgrade chemical units and reduce gas flaring, and is also accompanied by a \$5.8 million civil penalty. The settlement agreement between Shell and the environmental groups was subject to review by regulators (the EPA and the Justice Department) and also required the approval of the US District Court for the Southern District of Texas providing a measure of judicial oversight of the settlement. While it is impossible to achieve the ideal of putting the community back in the position it would have been in had the harm not occurred, the penalty will 'be used to finance environmental, public health and education projects in Harris County including a project to reduce diesel emissions from school buses, and another to install solar panels on public buildings' (Mouawad, 2009). Thus Shell's damage to the environment at Deer Park is at least partially offset by positive environmental action.

Strong environmental legislation, regulation and environmental awareness is often driven by the activities of high profile NGOs who work to ensure that prosecution of companies for environmental damage becomes an established part of the legal landscape (Nurse 2013). The legal responsibility of MNEs for injury to workers and environmental damage arising from their operations is increasingly exercising the interest of courts, governments, trades unions and NGOs globally and is beginning to be recognised by both civil and criminal justice systems, offering hope that an efficient mechanism for enforcing CER can be established.

Within the European Union (EU) the *European Directive on Environmental Liability*²⁴ provides potential for restorative justice techniques to be applied to remedying the harm caused in environmental damage cases. Environmental damage has a specific meaning within the Directive and is intended to cover the most serious cases including:

- Damage to protected species and natural habitats, which includes adverse effects on the integrity of a Site of Special Scientific Interest (SSSI) or on the conservation status of EU species and habitats outside SSSIs
- Adverse effects on surface water or groundwater consistent with a deterioration in the water's status
- Contamination of land that results in a significant risk of adverse effects on human health

The Directive establishes a framework of environmental liability to prevent and remedy environmental damage and is based on the 'polluter pays' and prevention principles. It incorporates principles of US legislation regarding the prevention and restoration of natural-resource damage and provides a means for corporations to pay compensation for natural-resource damage (Hinteregger, 2008). The regime makes operators liable for significant environmental damage, defined as 'a measurable adverse change in water, land and biodiversity quality.' However the Directive does not apply to diffuse pollution, such as air pollution, or to 'traditional damage' – personal injury and damage to goods and property. If environmental damage creates harm to members of the public or affects their goods and property, national civil liability laws would be invoked.

Where environmental damage has been caused the polluter must a) take necessary steps to control and contain the damage; b) restore the damaged environment directly or indirectly as agreed with the competent authorities (for example the UK's Environment Agency, the Government's environmental regulator); and c) reimburse those authorities who either restore damage or take action to prevent damage in default. Operators or the competent authority can recover the costs from a third party where it can be shown that it caused the significant environmental damage.

Central to the thrust of the Directive is the principle of encouraging operators to take adequate precautions and this brings CER into play as a means of preventing environmental damage. Operators are required to take preventive measures in the event of an imminent threat of environmental damage, and the regulatory authority (which could be responding to a request from a NGO) can require the operator to take preventative measures where it is deemed to be necessary. NGOs can also challenge the actions or inactions of the regulatory authorities and so are now able to scrutinise the effectiveness of monitoring and enforcement action.

The enactment of the *Environmental Damage (Prevention and Remediation) Regulations 2009* (the UK law which implements the Directive) provides a means for enforcers and designated regulators to remedy harm as long as their powers to do so are effectively used. The powers for remediation are consistent with other areas of law where regulators can make

²⁴ EC Directive 2004/35/EC on Environmental Liability with Regard to the Prevention and Remedying of Environmental Damage

binding awards and pursue negotiated settlements for complaints. Where legislation provides that regulators can decide not to take enforcement action if they can achieve compliance through negotiation and settlement with potential offenders; this option could be used by applying restorative principles. The use of enforceable undertakings is an emerging area in regulatory justice providing regulators with a pro-active tool that formalises their decisions and allows them to forego enforcement litigation if offenders agree to correct their misconduct and comply in the future. Parker (2004) argues that enforceable undertakings represent a means for applying restorative justice as an alternative to traditional regulatory enforcement action because these undertakings can facilitate the agreement of all parties involved in wrongdoing to correct a breach of regulations and prevent any further breaches. Parker's research identifies the following criteria that regulators take into account when deciding whether to pursue an enforceable undertaking:

1. The impact of the alleged breach on third parties and the community at large;
2. the type of practice
3. the product or service involved
4. the size of the corporation or corporations involved
5. the history of complaints against the corporation and complaints concerning the practice complained of
6. the nature of the product or industry and any relevant previous Court or similar proceedings
7. the cost-effectiveness for all parties of pursuing an administrative resolution instead of Court action
8. prospects for rapid resolution of the matter
9. the apparent good faith of the corporation

'Green wash' may, therefore, no longer work as a way of publicly promoting CER while privately continuing to pollute as the commitment to CER, the history of complaints against a company and the impact of its activities can and should be factors that regulators consider when determining how far a remedy for environmental damage should go. Friedman (1970) argues that corporate executives have direct responsibilities to their employers and to maximise profits. These responsibilities require executives to consider: the harm to a company's reputation (and profits) if it is repeatedly the subject of enforcement action and required to meet the costs of environmental remediation, the increased legal bills that a corporation may face in fighting lawsuits; consumer action and regulatory justice, and the increased likelihood of further regulation and scrutiny if corporations are found to be promoting CER while causing environmental damage. An increase in restorative justice mechanisms provides a tool through which enforcers and regulators can both work with corporations to promote solutions to environmental damage and to enforce remedies when voluntary compliance fails, taking into account the existence of CER policies as a means of identifying what corporations should be doing. This might be achieved through civil or administrative law.

Enforcing CER

Corporations who break environmental laws and fall short of accepted standards of behaviour are not always prosecuted via the criminal law but are sometimes subject only to civil or administrative sanctions. However Slapper (2011) identifies that there have been modest developments in the use of the civil law to address corporate abuses (2011:95) and that 'apart from a growth in domestic criminal liability of corporations' there has been an increase both in civil litigation against companies 'but also the advent of domestic liability for corporate torts that are committed abroad' (2011:95). Thus, while international law may not yet have caught up with transnational corporate environmental abuses, domestic law might, in some cases, provide a civil remedy.

Slapper's point is illustrated by US civil law in the form of the *Alien Tort Claims Act 1789* which allows action to be taken against companies for their actions overseas (Slapper, 2011, p.95). The *Act* confers on US federal courts jurisdiction over 'any civil action by an alien for a tort only, committed in violation of the law of nations or a treaty of the United States'. Thus where corporate acts which are the subject of litigation raise international concerns and constitute a crime against humanity, a remedy potentially exists for victims of corporate abuses able to bring a case in US courts. Cases can also be brought in the EU against a parent company resident in the EU where it can be shown that the relevant management decisions (i.e. those which influenced or caused the local incident) were made at parent company level. Fagan and Thompson identify class actions as being the primary legal mechanism feared by US corporations, which Hodges (2008) identifies as being based on a model where 'one individual claim is asserted to represent a class of others, whose owners are bound by the result of the single claim unless they opt-out of the class and procedure' (2008: 2). The class action procedure allows for punitive damages and requires parties to meet their own costs (Fagan and Thompson 2009: 56-57).

The existence of CER policies can also be a factor in litigation. The International Council for Human Rights Policy notes that while many company CSR codes are little more than public relations exercises, where worded with sufficiently clarity 'they can also have legal significance because they set out the values, ethical standards, and expectations of the company concerned, and might be used as evidence in legal proceedings with suppliers, employees or consumers' (2002: 70). Fagan and Thompson (2009: 55) identify that litigation has already been brought against companies such as Wall-Mart and Nike for publishing allegedly misleading CSR materials. Nike was the subject of litigation after having allegedly lied in PR materials about the mistreatment of workers in its supply chain, while Wal-Mart was sued for a failure to enforce its supplier standards. Thus while international human rights norms or international environmental law might be difficult to enforce against companies, CSR materials can, in the US at least, be used as evidence of the standards that a corporation *claims* to meet. Fagan and Thompson argue that consumers might be able to bring misrepresentation claims against corporations if they can demonstrate that they have suffered recoverable loss as a result of the claims made (2009:55). The threat of such litigation might encourage a change in corporate behaviour and when combined with criminal action such as that employed in the US Foreign Corrupt Practices Act (and also within UK legislation) of providing incentives for corporations to work with enforcers in order to avoid criminal prosecution and to settle cases through civil mechanisms (Hatchard 2011:153-155) can provide a remedy. Simpson *et al.* (2013) identify that informal controls are an important part of the regulatory environment while Hatchard argues that the threat of prosecution allied to self-reporting may prove effective in dealing with transnational corporate crime (2011;153).

The UK's Law Commission in its consultation paper on wildlife law reform (Law Commission, 2012) argues that any regulatory approach should adopt the risk-based approach of the Hampton (2005) and McCrory (2006) principles. In essence these argue that prosecution should only be resorted to where *necessary* and, in the case of corporate offending, should be a last resort where informal methods might yield results. The practical implementation of such mechanisms can be seen in cases such as the Serious Fraud Office's initiative to allow corporations to self-report corruption and negotiate a civil settlement as a means of avoiding prosecution (Hatchard 2011: 155). The effectiveness of such initiatives in part depends on whether the harm caused to corporations by any prosecution outweighs the financial benefits of non-compliance with environmental standards. Arguably where criminality is an endemic part of corporate behaviour (Nurse, 2011) self-reporting or negotiated settlements are unlikely to succeed.

Conclusions

While corporations may achieve voluntary compliance with CER and have appropriate CER policies at least on paper, it is essential that the application of CSR and CER principles are part of the legal and regulatory justice system rather than that system being applied only after environmental harms have occurred and disputes arise over corporate liability and appropriate remedies. Failures in voluntary compliance are inevitable where there are disputes between NGOs, corporations and communities over the responsibilities of corporations and the extent of stakeholder engagement. Where commercial imperatives override wider environmental responsibilities and are also associated with weak enforcement and regulatory regimes crime is more likely to occur. Given the lack of an enforceable standard for CER compliance, corporations and NGOs may disagree over what is required either to minimise the potential harm to the environment arising from corporate activities or to address harm to the environment once an incident has occurred. There are, therefore, undoubtedly some cases (or types of environmental damage) for which negotiation between communities and corporations, or corporations and NGOs is inappropriate and where self-regulation and voluntary CER policy-compliance fails. In these cases enforcers should be able to enforce CER through the imposition of remedial measures, reserving the right to move to formal prosecution action even though this may not provide full redress for the consumer.

Legislation needs to keep pace with persistent CER failures and corporate criminality; EU (and UK) legislation provides one means through which this can be achieved using restorative justice principles within the environmental law regime. The UK's *Environmental Damage (Prevention and Remediation) Regulations 2009* allows UK enforcers (generally the Environment Agency, the relevant local authority or Natural England) to require corporations to remedy their environmental harm. In addition the UK's *Regulatory Enforcement and Sanctions Act 2008* allows for restorative principles to be applied to some cases of damage to the environment (including under the *Control of Pollution Act 1974*, the *Clean Air Act 1993*, the *Environment Act 1995*, *Water Industry Act 1991* and *Water Resources Act 1991*) through the use of enforcement mechanisms that are designed to repair the harm caused by business practices (particularly through discretionary restorative notices and enforcement undertakings) rather than simply punishing offenders.

As Slapper (2011) indicates, US law now also provides a model that might be applied to enforcement of failed CER where CER compliance claims are found to be untrue or exaggerated and have the effect of misleading consumers. Such claims will primarily be the subject of civil action and it should be noted that the use of class actions is commonplace in the US but less so in the EU. But at least in theory, legislative and regulatory frameworks now exist that have not only moved firmly towards the 'polluter pays principle' but which also allow for the actions of MNEs to be measured against their CER promises and an implied standard of behaviour. Thus those that are responsible for environmental damage may not only be subject to criminal enforcement activity and/or civil litigation but open themselves up to judicial scrutiny of their corporate governance procedures through legal processes. While this falls short of achieving a global legal enforceable standard for CER, the availability of several routes through which CER failures can be enforced may not only make the polluter pay, but may also make the polluter stop and think.

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Conclusion: Linking the Green and the Mainstream

Angus Nurse²⁵

Several authors in this collection have conceptualised key issues in environmental justice and green criminology. As a fast developing discipline, green criminology offers scope for a critical exploration of real world problems relating to environmental crime and criminality including; environmental security, species justice, transnational crime and corporate wrongdoing. At its best; green criminology provides not only scope to consider such topics as ecological justice and illegal trading in wildlife from a theoretical perspective, it also provides a means through which mainstream criminal justice policy and practice can be scrutinised and improved.

Halsey (2004) was critical of green criminology's failure to clearly define itself, the nature of environmental harm and the types of regulatory structures needed to address environmental problems. Green criminology has developed considerably since this criticism and the papers in this collection are indicative of a healthy field renewing itself and seeking to make sense of a wider range of social harms than criminology has traditionally concerned itself with. The authors consider not just activities strictly defined as crimes by the criminal law, but also activities (such as industrial agriculture) that raise concerns about the harmful effects of ostensibly legal activities and practices (such as e-waste and corporate environmental harm) which fall under the remit of business regulation or the civil justice regime. As such, they illustrate the breadth of green criminology's reach concerned, as it is, with the interface between socially constructed notions of the legal and illegal, with individualistic and corporate notions of crime and deviance, and with the links between aspects of environmental law enforcement and mainstream law enforcement.

Environmental and Species Justice Perspectives

Green criminology routinely goes beyond the personal to consider the wider context and impact of its conception of crime. Rob White's notion of fusing the global and the local (2009) is cited by Doyon in this volume and is also reflected in Tanya Wyatt's paper on the criminological aspects of pig farming. Wyatt illustrates how a seemingly local issue, the development of an industrialised 'mega-farm' for pig production, raises wider environmental and species justice concerns. Wyatt's article contextualises not only questions about man's treatment of other animals but also about the treatment of communities where species justice and environmental justice concerns overlap.

Animal abuse (and wildlife crime) concerns risk remaining at the fringes of green criminology and being dominated by debates about the case for legal animal rights rather than embracing species justice principles into an integrated justice approach. Arguably wildlife and animal law has developed to a stage where animal protection through integration of legal enforceable animal welfare standards is now firmly enshrined in environmental policy and legislative systems (Schaffner, 2011; Nurse, 2013). The incorporation of international law mechanisms such as the *Convention on International Trade in Endangered Species* (CITES)

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into national legislation also means that, at least in principle, wildlife is protected from *certain* illegal activity (e.g. the illegal trade in wildlife) by making such practices subject to criminal sanctions. Yet the extent to which such mechanisms are enforced is as much a political decision as a moral one based on acceptance that humans owe a duty towards other inhabitants of the planet (Benton, 1998). Where human and non-human or ecological interests are in conflict governments generally calculate that animal/ecological interests should be seen as secondary, resulting in animal law that primarily reflects animals' status as property. Thus, as Wyatt observes, compliance with animal welfare legislation is very much a mixed bag and the industrial agriculture industry has 'a pattern of blatant disregard and non-transparency' in respect of its compliance with legislation. White (2007) identifies a main concern of species justice as being 'the rights of other species (particularly animals) to live free from torture, abuse and destruction of habitat' (2007: 38). Wyatt's article thus raises important questions about the status of animals as property, the extent to which a duty of care is owed to animals and about legal killing as a criminological issue.

From an environmental justice viewpoint, Wyatt and Doyon both illustrate Schlosberg's observations about the existence of environmental racism and the disproportionate risk poor and ethnic minority communities face in relation to environmental harms (Schlosberg, 2007: 47). Doyon refers to social harms arising from e-waste and corporate environmental crime while also alluding to environmental justice discourse and the negative impact on the poor, the vulnerable and ethnic communities arising from corporate activities and the location of facilities which have negative environmental impacts. Wyatt comments that more pigs mean more pollution and the potential for spills and leakages, noting that the people in proximity to industrialised agriculture are typically marginalised groups illustrated, in her example, by the citing of the mega-farm near to a women's prison. This central issue in environmental justice has frequently been discussed in historical green criminological discourse yet Doyon and Wyatt identify its continuance as a contemporary problem where technological developments (such as increased industrialisation) and new societal problems (such as e-waste) create new business opportunities for corporations in the environmental sector while also posing new regulatory challenges.

The Legal and the Illegal: Global Perspectives

Particularly in the area of exploitation of resources (including animals) green criminology critically examines the link between the legal and the illegal. Several authors in this collection highlight the human element of environmental crimes and the need for environmental policy to consider human behaviour both collectively and individually as a major source of environmental harm. Doyon, Wyatt and Nurse all note that humans have interest in maintaining a healthy environment but that the full consequences of human behaviour are not always taken into account. Wyatt's article raises the issue of externalities, the unintended harmful effects of pig farming, while Doyon discusses conceptions on deliberate action by corporations aimed at evading environmental regulations.

The lack of effective global enforcement and little or no integrated enforcement activity in respect of transnational crimes and crimes which are subject to multiple regulatory structures is also raised as an issue. Doyon refers to 'pollution havens' those jurisdictions with weak enforcement regimes providing environments where large corporations are subject to less stringent regulation than they might find in western, environmentally conscious jurisdictions. Nurse discusses how corporate environmental responsibility while accepted in principle is a concept subject to varied interpretation with no clear definition. As a result clearly identifying the precise nature of corporate environmental wrongdoing is problematic, enforcing norms

and standards of corporate behaviour even more so.

Green Criminology and the Mainstream

Green criminology's strength is its ability to apply ideas about mainstream crime to green issues, whilst also applying green perspectives to mainstream criminological concerns. In doing so it develops criminological discourse. Doyon explains how techniques of neutralization (Sykes and Matza, 1957) are an integral factor in corporate environmental crime, thus applying core criminological theory directly to an environmental problem. In her case study, Executive Recycling Inc. denied responsibility for its actions, claiming to be victims while also behaving in a way that demonstrated little acceptance of the legitimacy of, or need for, the enforcement regime. Enforcement of environmental crimes can be problematic where criminal justice systems prove inadequate to the task of dealing with particular offence types. Corporate crimes are of particular concern given the difficulty of either identifying specific individuals within the corporation who are culpable for the offence or in taking enforcement action against a corporate body. Doyon identifies for example that while the prosecution of Executive Recycling Inc. was a landmark case, the resultant convictions were largely for business offences rather than for green crimes.

The enforcement conception is an important one; Doyon discusses how a lack of enforcement has often aided the emergence of new forms of corporate environmental crime. Patten *et al.* note that game wardens are often required to attend traditional law academies and that game workers are no longer solely concerned with catching poachers but also deal with armed felons and more 'traditional' crimes. Gun-related crime, a core concern of mainstream criminality is a primary cause of game warden deaths. Thus green law enforcement and mainstream law enforcement have moved closer together but Patten *et al.* conclude that game warden fatalities are rare and are more likely to occur when wardens are engaged in fish and wildlife related activity, thus a shift towards a more generalised policing role has not resulted in more felonious deaths.

Green criminology's value is, in part, its contribution to a broader and deeper understanding of crime and criminal behaviour. Charlotte Davies in discussing the value of offender data collected and held by NGOs reinforces this principle by confirming that the green perspective goes beyond reliance on traditional criminal justice agencies to engage with a range of stakeholders and enforcement bodies who are engaged in practical environmental law enforcement and policy development. Engagement with NGOs and other practitioners is integral to green criminology's continued development beyond Halsey's criticism as a discipline that not only theorises about green crimes but takes active steps to contribute towards policy and practice that addresses environmental harms.

This collection began by questioning whether green criminology allows for the application of a green perspective to mainstream criminal justice issues, or whether it is solely a tool for applying criminological perspectives to distinctly green crimes? The essays in this collection illustrate that green criminology, in fact, provides both perspectives. By examining mainstream criminal justice through a green lens and integration of mainstream criminological ideas into analysis of environmental issues green criminology offers hope for a new, broader and more inclusive notion of justice incorporating notions of social as well as criminal harm.

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