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# Environmental Victims: Challenges for Criminology and Victimology in the 21<sup>st</sup> Century

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## **Purpose:**

This paper addresses the issue of 'environmental victimisation' (harm to individuals suffered as a result of environmentally damaging activities) and asks what role criminologists in general and victimologists in particular will have to play as our understanding of the consequence of climate change and other environmental degradation develops still further.

## **Design/Methods/Approach:**

The paper draws on a social harms approach to argue for an extended definition of such victimisation, beyond restrictive legal categories.

## **Findings:**

Clear parallels are demonstrated between the subjects of 'green criminology' with more 'mainstream' victimological and criminological developments (in the academy and in policy making circles internationally). This demonstrates the relevance of 'environmental harm' to existing and long-standing debates talking place in both areas, including those concerning the nature of victimisation and the responsibilities of the state to those victimised. The argument is illustrated through a discussion of various classifications of environmental harm, including harm to health, security, the economy, social and cultural impacts and the unequal distribution of such impacts around the world and between different socio-economic groups.

## **Practical implications:**

The implications of the paper are that a great deal more research needs to be carried out by criminologists and victimologists on the subject of 'environmental harm', and indeed these scholars are likely to be increasingly approached for views/data on this issue in the coming years. Such developments therefore need to be recognised by funding bodies, Universities and so on.

**UDC: 343.988:504**

**Keywords:** environmental harm, critical criminology, victimisation, victimology, green crime

## Okoljske žrtve: izziv za kriminologijo in viktimologijo v 21. stoletju

### Namen prispevka:

Prispevek obravnava »okoljsko viktimizacijo« (prizadetost posameznikov zaradi dejavnosti, ki škodijo okolju) in se sprašuje, kakšno vlogo bodo morali igrati kriminologi in še posebej viktimologi v prihodnje, saj se naše razumevanje posledic klimatskih sprememb in drugih oblik degradacije okolja še vedno razvija.

### Metode:

V prispevku je uporabljen pristop »družbene škode«, ki zahteva širšo definicijo tovrstne viktimizacije, ki presega omejevalne pravne kategorije.

### Ugotovitve:

Pokazale so se jasne vzporednice med subjekti »zelene kriminologije« in bolj prevladujočimi (»mainstreamovskimi«) viktimološkimi in kriminološkimi tokovi tako v akademskih krogih kot pri oblikovanju politike na mednarodni ravni. To kaže na pomen »okoljske škode« za obstoječe in dolgoletne razprave na obeh področjih, vključno s tistimi v zvezi z naravo viktimizacije in odgovornostjo države do žrtev. Argumentacija je izvedena skozi obravnavo različnih klasifikacij okoljske škode, vključno s škodo za zdravje, varnost, gospodarstvo, družbenimi in kulturnimi vplivi ter neenako porazdelitvijo teh vplivov po svetu in med različnimi socialno-ekonomskimi skupinami.

### Praktična uporabnost:

Uporabnost prispevka je v ugotovitvi, da morajo kriminologi in viktimologi opraviti mnogo več raziskav na temo »okolje, škoda«. Prav ti znanstveniki bodo v prihodnjih letih vse pogosteje spraševani po mnenju in podatkih glede teh vprašanj. Tak razvoj pa morajo prepoznati tudi tisti, ki financirajo raziskave, univerze in drugi.

**UDK: 343.988:504**

**Ključne besede:** okoljska škoda, kritična kriminologija, viktimizacija, viktimologija, zelena kriminaliteta

## 1 INTRODUCTION

In the 21<sup>st</sup> century criminal victimisation has become a major area of academic debate and policy movement across most of the developed world. One of the most significant consequences of this has been the light which has been shed on the needs and suffering of a multitude of victims who were previously all but invisible in the eyes of both criminal justice systems and the public at large. Such victims include those effected by domestic violence; child and other vulnerable victims; the friends and family of murder victims and both male and female victims of rape. Recognition of the problems faced by these distinct groups both within and beyond criminal justice processes has undoubtedly led to significant improvements in their treatment and support in many jurisdictions (Hall, 2010). Yet the victimological literature increasingly recognises that other groups have to some extent been left behind the main vanguard of this 'victims movement'. Among these still neglected

groups are those victimised by actions of the state, corporate victims, the corporate and individual victims of white collar crime and those harmed by the adverse effects of pollution and climate change. It is this last group, which I will refer to as 'victims of environmental harm', with which this paper is primarily concerned<sup>1</sup>.

The present paper addresses the issue of environmental victimisation, drawing on ideas and concepts developed by victimologists over the last thirty years to this relatively new field. The goal of the paper is a modest one: to expose environmental victimisation as a rapidly developing issue on which criminologists and victimologists will be increasingly called upon to offer academic commentary and critique. To this end, a further goal of this piece is to expose environmental victimisation as a complex and holistic *social problem*, and its overlaps with more 'mainstream' criminological and victimological thought.

## 2 VICTIMS OF ENVIRONMENTAL HARM: INVISIBLE TO CRIMINOLOGISTS?

In a recent review of the state of victims of environmental crime in the Canadian Criminal Justice System Skinnider (2011: 25) makes the important point that:

"Victimologists have generally not included victims of environmental crime in their research. Further study is required to get a better understanding of this type of victimization and how it differs from other types of victimization."

Indeed, although the field of zemiology has continued to address victimisation through social harms beyond crime and the traditional confines of criminology (Hillyard, 2006), much of victimology (and criminology) continues to be centred on notions of victimisation espoused by official sources, often through the criminal law. It is important to note that this focus is not based on any inherent limitations of criminology<sup>2</sup> as a discipline or the theories it promotes. As noted by Matthews and Kauzlarich (2007: 53):

"Most criminological methods and theories can be applied to behaviors independent of whether those behaviors are officially defined as crimes. In short, criminological theory attempts to explain behavior – and that behavior may or may not be criminal, but is likely deviant in some way."

For McBarnet (1983), it is *victimologists* (as opposed to *victimology*) who are partly to blame for this state of affairs. By concentrating their attention predominantly on traditional notions of victimhood (with particular emphasis on rape victims) the author argues that researchers in the field have somewhat played

1 Lynch and Stretesky (2007) have argued that the lack of development in the criminological study of environmental degradation is particularly apparent in the USA, although it is generally true of the discipline globally. They note the irony in this, as some of the first true 'green criminology' discussions came out of the USA (see Lynch, 1990).

2 Assuming for the moment – along with Farrall and Maltby (2003) – that victimology lies somewhere within its ambit.

into the hands of governments wishing to derive political capital from victims, and from punitive criminal justice responses:

“Like traditional criminology before it [victimology’s] too-ready acceptance of official definitions of criminal and victim have reinforced rather than questioned the status quo.” (ibid.: 302, emphasis in original)

These sentiments take on an added dimension when applied to the issue of environmental harm, because such discussion may often concern harms perpetrated (or at least endorsed) by the state itself, or even to state crime (Ruggiero & South, 2010). Elias (1983, 1986) and Rock (1990) go further to argue that society’s narrow conception of victimisation is brought about by selective definitions of crime, construed for political purposes.

Such arguments have led to the development of so-called ‘critical victimology’ and its expanded notions of victimhood beyond simple, criminal classifications (Hough, 1986; Dignan, 2005). Indeed, in many ways environmental victims fall squarely within the category of “real, complex, contradictory and often politically inconvenient victims” (Kearon & Godey, 2007: 31) with which the critical critique is so concerned. This is particularly so given the reality that not only do environmental harms often derive from entirely *legal* activities, there may in fact be very sound economic and/or political justifications for a company or a state to passively allow such activities to continue, or even actively promote them (Walters, 2006). Of course, as noted by Ruggiero and South (2010), such political and economic decisions are heavily influenced by the power inequalities which are another feature of the critical school:

“[T]he high status of those causing the most [environmental] harm who (like other powerful offenders) frequently reject the proposition that criminal definitions should apply to them while constantly striving to persuade legislators that the imposition of norms of conduct on them would be detrimental to all.” (ibid.: 246)

Partly in response to such radical criticisms of the status quo there has been a marked expansion of official notions of victimhood over the last decade, but even when this is taken into account victims of environmental harm have received very little attention.

### **3 FINDING SOLUTIONS: THE ‘SOCIAL HARMS’ APPROACH?**

Gibbs, Gore, McGarrell, and Rivers (2010) provide an excellent overview of the various classifications and definitions of so called ‘green criminology’, starting with the so-called ‘legalistic’ understanding of environmental crime as violations of criminal laws<sup>3</sup> designed to protect the health and safety of people, the environment

<sup>3</sup> *Although the widespread criminalisation of such harms is a relatively new legal phenomenon, it is not without historical antecedents. McMurry and Ramsey (1986: 113) for example describe how “In fourteenth century England the Crown prescribed capital punishment for Englishmen who de-*

or both (ibid.: 126). The legalistic position is contrasted to the socio-legal approach, which acknowledges that the differences between 'crime', 'deviance', 'civil wrongs' and 'regulatory violations' are all socially constructed. It is for these reasons that, in the above paragraphs, I have employed the term 'environmental harm'. The concentration in this paper on 'harm' as opposed to 'crimes' is an application of the critical critique discussed above and, more specifically, the 'social harms' approach advocated by Hillyard and Toombs (2003: 2). These authors have argued that, in more recent years, the progress of both critical criminology and victimology has stalled somewhat from their heyday in the 1960s and 1970s, giving way to an empiricist 'applied science' orientation driven by the political issues of the day. The authors therefore advocate in response to this a return to a criminology based on social harms, and it is in this tradition that this paper situates itself<sup>4</sup>.

This conceptualisation of victims as those who have suffered harm (as opposed to a more technical, legal, or prescriptive definition) has two key implications. Firstly, as an underlying principle it gives scope for a wide cross-section of individuals or organisations to be included within the ambit of victimhood, especially given the inclusion of 'emotional suffering' within such definitions. Secondly, this understanding of victimhood to some extent allows victims to be self-defined. In other words, such a definition is not, on the face of it, confined to cases where prosecutors in a given state feel there is an arguable case, merely requiring that victims feel they have been harmed in some way.

Focusing on 'harm' rather than crime has, according to Hillyard and Toombs (2003), a number of advantages, which seem to have particular resonance with the impacts of environmental pollution and climate change. 'Crime', as argued by Hulsman (1986), has no 'ontological reality' and hence "the criminal law fails to capture the more damaging and pervasive forms of harm" (ibid.: 12). One may debate the degree to which one agrees with the wider implications of such a sweeping statement, but it remains clear that focusing on harm has the potential to include the often legally ambiguous activities which foster environmental damage. Indeed, even when such activities are criminal in the strict legal sense, focusing on harm allows us to account for such activities in cases where whatever mechanisms of justice which are available (at the national, transnational and international levels) fail to adequately prosecute such transgressions. Another salient point made by Hillyard and Toombs (2003) is that the social harms approach allows for the consideration of 'mass harms'. Again this chimes well with the problems inherent to environmental disasters, where many thousands of people can be affected. Traditional criminology, on the other hand, has struggled to fully embrace the concept of mass victimisation and, with exception of limited inroads into the fields of state crime and corporate crime, has largely remained focused on the individual. For similar reasons, the authors argue that the social harms approach

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*fied a royal proclamation on smoke abatement." Furthermore, Roughton (2007) notes that religious scholars have begun to rediscover and reapply environmental precepts of centuries-old Islamic law (shariah law).*

4 Although, as with Hillyard and Toombs' (2003) work, this is not to dismiss the important contribution of modern criminology.

poses a challenge to individualistic conceptions of crime grounded around notions of risk (Giddens, 1990)<sup>5</sup>.

Turning to *environmental* harm, Hillyard and Toombs' (2003) approach has much resonance with some of the earliest literature from what has been termed 'the environmental justice movement' (Williams, 2009<sup>6</sup>: 200). Environmental justice has been variously defined and is generally acknowledged as a wide concept which emphasises the involvement of people and communities in decisions which might impact upon their environment, defined broadly to include their cultural norms, values, rules, regulations and behaviours (Bryant, 1995: 6; see also Hofrichter, 1993; Čapek, 1993). One of the main commentators on these issues (and on green criminology in general) is White (2008) who, in following a more holistic approach, has criticised this understanding of environmental justice as being anthropocentric, ignoring the wider issue of *ecological* justice (acknowledging that humans are just one part of a complex ecosystem) and also *animal* and *species* justice.

White (2008) also reflects on the concept of harm itself, offering four groups of key 'considerations of environmental harms' (ibid.: 92). The first of these considerations is that of *identifying* the victims of such harm. Although in this paper I am mainly concerned with human victimisation, White makes the important point that victims of environmental harm include the biosphere and non-human animals. It follows that a further advantage of applying the social harm approach in this field is that it allows commentators to explore the non-human consequences of environmental degradation beyond the highly anthropocentric concept of 'criminal victimisation'.

The second of White's considerations are geographical, encapsulating the fact that environmental harm is often a regional, national, international or even global problem. It is for this reason that the present paper advocates closer collaboration between green criminologists and those studying international law: in an effort to address these forms of harm which purely national legal systems may be ill-equipped to deal with. In a similar vein, White distinguishes geographical considerations from considerations of 'place', by which he means the different types of harm experienced in urban, built-up centres of human habitation, compared with harm caused to natural environments such as oceans, wilderness areas and deserts. Finally, White conceives environmental harm in terms of temporal considerations, meaning that the impact of environmental damage may be short, medium or long term and may have immediate and/or lasting social impacts. There is a key link here to be made with more mainstream victimology and its growing acceptance that the impacts of individualistic harms (crime) vary considerably over time (as well as between individuals) and, with it, the support needs of those victimised. Even in mainstream victimology there is an absence of longitudinal studies which truly encapsulate the progression of the impacts of individualistic victimisation over time (Shapland & Hall, 2007).

5 Although, for Gibbs et al. (2010), 'environmental risk' is a key feature of their conception of 'conservation criminology', which they use as a method of distancing the concept from more legalistic understandings of 'environmental crime'.

6 References in this paper are to the recent reprint of Williams' paper.

White's 'considerations' of environmental harm may in one sense be criticised for failing to 'pin down' the concept to specific human or non-human impacts. Certainly Hillyard and Toombs (2003) are more explicit in their definition of social harm in that they conceive it as including physical harm; financial/economic harm; emotional/psychological harm and consideration of so-called 'cultural safety'. Nevertheless, the counter argument can be made that to rigidly define 'harm'<sup>7</sup> would in a sense defeat the purpose of the critical exercise; which is to be inclusive rather than exclusive. As such, for White (2008) it is important for commentators, especially those concerned with green issues, to move beyond *defining* harm and onto *debating* harm, because it is only the latter which leads to real-life, operational developments. Of course, it must be acknowledged that such a view presents real difficulties for those seeking to develop *legal* systems for addressing environmental harms, as such a system must ultimately be based on concrete and predictable definitions of victimisation.

## 4 CLASSIFICATION OF VICTIMS OF ENVIRONMENTAL HARM

Whilst attributing a precise definition to environmental harm is problematic (certainly with regards to *legal systems*) and perhaps undesirable, the evidence is increasingly clear that whether such harms are criminalised or not, they have become a pervasive and significant problem. It is submitted that criminologists and victimologists will have an increasingly role to play in the debates surrounding such harms. Skinnider (2011) discusses a number of ways to classify victims of environmental harm: by nature of wrongful acts; by extent of damages suffered; by scope of harm; by perpetrator and by nature of the harm to victims. In-keeping with the social harms perspective outlined above, the following overview classifies such victims by form of harm.

### 4.1 Health Impacts

Perhaps some of the clearest and immediately concerning impacts of environmental degradation and climate change are the health implications for human beings. Indeed, at first glance the health effects associated with environmental victimisation appear to substantially bypass the difficulties outlined above concerning the wide ambit of 'social harm'. This is chiefly because, compared to the more subtle categories of environmental harm to be discussed below, 'health impacts' tend to be relatively obvious (or at least become so over time) and are usually scientifically verifiable. This renders such effects a much better fit with existing legal principles in most jurisdictions around the world, which tend to favour positivistic virtues like certainty, predictability and objectivity. Such harms are also generally speaking quantifiable, which aligns them well with systems already in place at the national and international levels to compensate parties physically and mentally injured as a

<sup>7</sup> Which is not the intention of Hillyard and Toombs (2003).

result of criminal acts (see Miers, 1991; Hall, 2010). Of course, any legal system set up to consider or address these issues is still likely to be premised on set, usually restrictive, ideas on matters such as 'health' and what it is to 'be healthy' (see White, 2011).

The last point notwithstanding, the regularity with which we are presented with alarming facts and statistics concerning the impact on human health of almost any form of environmental degradation, pollution, dumping, or climate change reflects the significance of the challenges faced by the world's legal systems. For example, in the UK alone the Department of Health (1998) has estimated that at least 24,000 deaths can be attributed to air pollution each year. Globally, the World Health Organisation (2008) has estimated the same annual figure at around 2 million premature deaths. As we broaden the scope of the discussion beyond air pollution, Patz et al. (2000) report that the long term consequences of climate change as a whole will bring about adverse impacts on public health (in this case in the USA) via a diverse range of consequences which include: heat-related illnesses and deaths; extreme weather events; water and food-borne disease and vector and rodent borne diseases.

Another pertinent example is the legal and illegal dumping of hazardous waste materials, as a bi-product of industrialisation, where the health implications of such activities are if anything more directly palpable. Ruggiero and South (2010) for example cite numerous cases of death and illness brought about in areas exposed to hazardous waste materials, including the so-called 'cancer villages' of China, where residents' increased susceptibility to several classifications of tumours has been directly attributed to their exposure to cadmium and mercury released through the recycling of e-waste (Watts, 2010: 21). In Italy, Martuzzi et al. (2009) have identified statistically significant increases in cancer mortality and congenital anomalies in Campania, a region subject to intense environmental pressure due to uncontrolled and illegal practices of industrial waste dumping. More recently, the United Nations Environment Programme has reported that the environmental restoration of Ogoniland in Nigeria, following 50 years of oil operations, could prove to be the world's most wide-ranging and long term oil clean-up exercise ever undertaken. The data for the report included over 5,000 medical records and the conclusion drawn revealed that "at least 10 Ogoni communities where drinking water is contaminated with high levels of hydrocarbons, public health is seriously threatened" (United Nations Environment Programme [UNEP], 2011: online).

Whilst the above paragraphs provide only a pottered and unsystematic flavour of some of the health implications of environmentally destructive activities, they do serve to illustrate the pervasiveness, complexity and scope of the issue. They also illustrate why those who fall victim to such health effects may well feel aggrieved and choose to seek redress in a criminal court if and when such victimisation is attributable to identified parties, organisations or states. As such, criminal justice systems need to be in a position to respond to such harms. Health impacts also of course have significant knock on effects which blur the boundaries between these impacts and some of the other categories discussed below. For example, increased sickness brought about by contaminated water in a given locality will lead to higher healthcare costs in that area, and higher health insurance premiums

(see International Association for the Study of Insurance Economics [IASIE], 2009). They may also have social impacts if those affected are unable to participate in the same social and community activities they did before. As such, as with all areas of victimisation (see Shapland & Hall, 2007), it is important to realise that environmental harms do not fall within neat, easily separable categories but rather flow into each other to create a holistic social problem. The argument can thus be made that like, many other social problems, criminal justice systems have a role to play in their resolution.

## 4.2 Economic Impacts

The best estimates that exist of the monetary/fiscal cost of environmentally damaging activities run into the billions in any currency. As such, following on from the increased mortality rates highlighted in the previous section, the WHO recently estimated that deaths caused by air pollution are costing economies within the European Union around 161 billion Euros a year. The United Nations Environmental Programme (see Mullier, 2010) estimates the worldwide turnover of green crime at \$31 billion annually. In the business world, studies have indicated a likely negative impact of climate change on a wide variety of industries ranging from paper production (1992); the wine industry (Nemani et al., 2001); tourism (Berritella, Bigano, Roson, & Tol, 2006) and fishing (Markowski, Knapp, Neumann, & Gates, 1999). Another example of the broader economic impact of environmental degradation is that of the insurance sector. In 2009 the International Association for the Study of Insurance Economics acknowledged that climate change will inevitably lead to higher costs “largely due to socio-economic factors such as value concentrations in coastal areas” (IASIE, 2009: 42).

In some cases, such negative impacts on industry will have significant financial implications at the national level. For example, in one case study the International Institute for Environment and Development (Reid, Sahlén, MacGregor, & Stage, 2007) has concluded that climate change will have a major impact on the Gross Domestic Product of Namibia. In all such cases, of course, a threat to any national or local industry is a threat to the livelihoods and, in many cases, ways of (social and economic) life of those involved in those industries. Whilst the economic effects of environmental degradation appear to fall disproportionately on poorer countries, people in more developed parts of the world face similar threats to their means of economic sustenance. As such, in one recent report a fisherman in Louisiana facing reduced shrimp hauls ostensibly as a result of the 2010 Gulf oil spill was quoted as saying:

“We don’t have millions of dollars sitting in the bank where we can go do something else. We live and die on the seafood industry. This is our culture... this is how we live.” (Lee, 2011: online)

It is at this point that the impact becomes not just economic, but social and cultural<sup>8</sup>: again illustrating the holistic nature of the issues at hand. Indeed, increased poverty due to economic downturns precipitated by environmental degradation will almost certainly feed back as negative health implications on those impoverished (Haan, Kaplan, & Camacho, 1986). Again the differing 'impacts' of environmental harm prove difficult to distinguish from one another.

### 4.3 Social and Cultural Impacts

Quantifying 'social' or 'cultural' damage to a people or community as a result of environmental harms is of course extremely challenging, although as an exercise it is by no means alien to more mainstream criminology (Taylor, 1995). As a category of impact, it is also central to the notion of environmental justice, which is usually said to encompass harm to "cultural norms, values, rules, regulations and behaviours" (Bryant, 1995: 6). Initially it may seem straightforward to dismiss these impacts as 'less tangible' than some of the others discussed above. These are not abstract speculations however: indeed loss of one's traditional cultural activities and lifestyle can itself have significant economic and health effects. For example, there are a number of discussions in the literature concerning the people of the Maldives, who are presently facing significant risk to their homes, economy and traditional ways of life as a result of sea level rises ostensibly brought about by climate change (see Cairns, 2010). Of particular relevance to the present discussion, these debates have reflected at length on whether corporate entities or even foreign states might be held responsible (criminally or otherwise) under international law for the damage that has been done to the islander's traditional fishery culture (Markowski et al., 1999). The further example of shrimp fishing in the Gulf of Mexico has already been discussed. The key point for present purposes is that it is these traditional *cultures* which also provide these environmental victims with the practical necessities of living (food, livelihood etc.). In another example, Wheatley (1997) has elaborated on the social and cultural impacts of mercury pollution on aboriginal peoples in Canada. The author stresses the holistic view of the environment taken by such communities and notes that the impacts of such harm therefore go well beyond the physical. Similar observations have been made in the US context, where Brook (2009) has labelled the threat to Native American sovereignty precipitated by the industrial dumping of toxic waste on tribal lands as a form of 'environmental genocide'.

A loss of cultural and social stability brought about by environmental victimisation can also have far reaching criminogenic implications, leading to victimisations. One especially relevant issue, with which the criminal justice agencies of most developed countries are already heavily concerned, is that of human trafficking. The concern about trafficking in the context of the present discussion stems from the expected increase in displaced people and forced migrations, as well as a general increase in poverty in parts of the world which

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<sup>8</sup> Discussed in the next section.

are hardest hit by climate change (Hartmann, 2010). Indeed, the link between displaced peoples/forced migrations and human trafficking has been drawn by a number of researchers (see Lee, 2007). The United Nations University's Institute for Environment and Human Security (2008) in particular has demonstrated specific connections between migrations *forced by environmental factors* and a susceptibility of these displaced individuals to human trafficking.

#### 4.4 Victims of Reduced Security

Ideas concerning 'security' have been increasingly linked to environmental concerns to produce a distinct literature on 'environmental security' (Graeger, 1996). Definitions of environmental security differ, with no overarching understanding yet agreed upon (see Heckler, 2011), but generally the concept tends to link environmental degradation and the associated scarcity of resources with human conflict at individual, group and state levels. Brunnée (1995: 25) conceives it as "the prevention and management of conflicts precipitated by environmental decline". Although typically limited to the field of armed conflicts (which naturally result in considerable loss of life and personal injury to human victims) more recent definitions of environmental security tend to include a wider body of threats to the natural environment (Ullman, 1983). For example, in recent years the concept of environmental security has led some commentators to speak of 'environmental terrorism', which Chalecki (2001: 3) defines as "the unlawful use of force against in situ environmental resources so as to deprive populations of their benefit(s) and/or destroy other property".<sup>9</sup> Schofield (1999) adds to this the use of the environment as a conduit for destruction (such as poisoning the water supply of an urban centre). Whilst this is a contested topic, Schwartz (1998) discusses how environmental terrorism has gained considerable public, political and academic support since the early 1990s. Thus, by 2008, New York City was spending a \$12million grant from the US Environmental Protection Agency on its Water Security Initiative, a pilot program to develop and evaluate a contamination warning system for its drinking water distribution network. There have also been marked concerns voiced regarding the possibility of terrorist attacks on oil pipelines in Russia and Central Asia (see Adams, 2003). Schwartz also called for the development of a crime of 'ecocide' to reflect the social condemnation of such deliberate acts of wasteful environmental destruction.

For the purposes of this present discussion, the important observation is that, as natural resources become restricted by the various impacts of climate change and environmental degradation, this is likely to make such resources increasingly precious to states and therefore increasingly attractive to terrorist groups seeking

<sup>9</sup> As distinguished from 'eco-terrorism', which constitutes 'terrorist' acts in support of the environment and animal rights. That said, eco-terrorism itself is increasingly the subject of punitive criminal responses (notably in the UK under the Animal Enterprise Terrorism Act 2006). There is also a link here with concerns over food security (discussed below) as the US Food and Drug Administration has expressed grave concerns about the possibility of bioterrorism against food supplies (White, 2008).

to achieve symbolic victories. The response of governments is again likely to be increased regulation and the rollout of harsher penalties (and new crimes) for environmental terrorists, just as the scope of 'terrorism' itself was expanded in many jurisdictions in the light of the terrorists attacked in the US of September 11<sup>th</sup> 2001 (Mythen & Walklate, 2006).

Whilst the human impact of threats to environmental security in general are very real (whether they take the form of increased susceptibility to direct or indirect harm through terrorist activity, increased fear, threats to livelihoods or the need to adapt to stricter regulatory regimes) for many they are perhaps less immediate than the dangers posed by the more specific threat to 'food security'. Food security has been defined by the World Food Summit of 1996 as existing "when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life" (United Nations Food and Agriculture Organization, 2010: online). The concept is usually understood as including both physical and economic access to food that meets people's dietary needs as well as their food preferences (Pinstrup-Andersen, 2009). At present much of the literature and policy attention in various countries has focused on the immediate health and humanitarian implications of food security coming under threat, however the legal and criminogenic implications are also beginning to be assessed. MacLeod, Pautasso, Jeger, and Haines-Young (2010) for example has written at length on the introduction of regulative frameworks intended to preserve food security. In China, the National People's Congress Standing Committee has recently introduced criminal sanctions, including heavy fines and prison sentences, to anyone prosecuted of adding poisonous or harmful ingredients during the production of food (CNTV, 2011).

It had been widely predicted that the impact of climate change on crop levels would lead to a drop in supply and therefore a rise in the price of food, with obvious implications for food security (See Schanbacher, 2010). This effect was confirmed by Lobell, Schlenker, and Costa-Roberts (2011) in May 2011. Of course, a rise in the price of food itself has many criminogenic (and victimogenic) implications. Lack of food may lead to localised violence and riots about food prices, as demonstrated by the unrest felt across some 20 countries in 2008, when world food prices reached crisis levels (Ivanic and Martin, 2008). In the African context, Takemura (2007: 25) asserts that there is a "deepening anger and resentment' among people at the bottom of society, fostered by a rise in food prices, which could threaten stability in developing countries".

Environmental degradation therefore undermines security in a number of ways which have the potential to exert major consequences for human beings in terms of their health, safety and continued prosperity. It can also be gleaned from the above that threats to security may also prompt increased deviance, with obvious implications for criminologists.

#### **4.5 Inequality of Impact**

There is a further dimension to the picture concerning environmental victimisation which in many ways underscores all the above discussions. Whilst Williams (2009:

201) has criticised the assumption of the powerless as environmental victims and the powerful as environmental victimizer as promoting “a stereotyped view that omits the victimization of those with power and wealth”, the overriding evidence now points to endemic inequality in the distribution of the harms discussed in this paper (Dobson, 1998). There are several elements to this inequality, one of which is geographical. Indeed the geographically unequal impact of climate change is well recognised by the international legal order, with the preamble to the 1992 UN Framework Convention on Climate Change (United Nations, 1992). acknowledging the particular vulnerability of ‘low-lying and other small island countries, countries with low-lying coastal, arid and semi-arid areas or areas liable to floods, drought and desertification, and developing countries with fragile mountainous ecosystems’<sup>10</sup>. The more complex dimensions of the problems however are social and economic. Examples like that of the Maldives therefore reflect the further important observation that victimisation as a result of climate change is distributed very unevenly, with the poorest, most disadvantaged countries and groups within countries tending to suffer most. As acknowledged by the International Association for the Study of Insurance Economics’ (2009: 108):

“unmitigated climate change may have significant adverse effects on the long-term development of the world economy, ranging from water shortages for food production to an increased severity of tropical windstorms. Developing countries are particularly vulnerable, facing the risk of social disorder and mass migration”.

The unequal distribution of environmental victimisation has been commented on by South (2010), who sees this as reflecting wider tendencies towards ‘social exclusion’ which have long been a topic of research and discussion in mainstream criminology. In relation to environmental victimisation, Lee (2009: 3-4) has summarised the situation in the following terms:

“Poor people are usually excluded from the environmental decision-making process, and once a policy is made, they are usually powerless to change it”.

In addition, various scholars have commented on how the problems brought about by environmental degradation fall disproportionately on women (Women’s Environment and Development Organization, 2008), and indeed Warren (1997) argues that eco-feminism was an important contributing force to the development of the green movement (just as feminism played a large role in the development of the ‘victims movement’ more broadly).

## 5 A GREEN VICTIMOLOGY?

As noted previously, the application of criminological principles to environmental degradation is itself a new and emerging specialism under which various issues have been addressed by scholars from differing backgrounds in a rather

<sup>10</sup> See also Art 4(8).

piecemeal fashion. Specific focus within this literature on those actually affected by environmental deprivation is relatively scarce, although the first call for the development of what was then turned 'environmental victimology' came as early as 1996 in an article by Christopher Williams (2009). Williams begins his argument by acknowledging the 'limits of law' (Williams, 2009: 200) in addressing environmental victimisation and, much like Hillyard and Toombs (2003: 200) would later follow, notes the "obvious need for social justices to parallel formal legal processes". Nevertheless Williams is also very keen to develop some form of predictable legal mechanism for dealing with environmental harms.

Williams' understanding of environmental victims stresses the concept of intergenerational justice, which is often cited as a core component of the anthropocentric environmental justice model (Hiskes, 2008). Mares (2010) has also alluded to intergenerational justice in his discussion of conceptualising environmental degradation as compromising the 'carrying capacity' of the Earth (i.e. its ability to support a given number of human and non-human life forms). Williams' understanding of such victimisation also includes polluting acts and *omissions*, leaving open the possibility that *failure* on the part of the state to sufficiently regulate an activity may lead to it being held responsible for consequential environmental harms. Whilst Williams is clearly attempting to achieve a measure of certainty in his conceptualisation of such victims, it should be acknowledged that the exact link between harm to victims and the chemical, physical, microbiological, or psychosocial environments may change overtime with scientific knowledge, possibly leading to lengthy court cases with a great deal of complex expert evidence. One last point to make about Williams' understanding is that he clearly means for it to include the long-term victims of what he calls 'creeping environmental disasters', such as climate change and changes in the sea level, as opposed to one-off events like oil spills or nuclear leaks.

It is extremely telling of the state of the literature in this field that when White compiled a reader on environmental crime in 2009, the only chapter specifically focused on the victims of such crimes was in fact a reprint of Williams' 1996 work. A further edited collection from White (2010) has no specific chapter on victimisation at all, although it does contain a chapter from South (2010) who in one section reflects upon the unequal impact of climate change on various groups of (usually poor) victims, and the possibility that some 'environmental rights' are being breached. Notably this discussion somewhat contradicts William's view that the impact of environmental harm are more evenly spread.

White (2011) has more recently dedicated a chapter to environmental victims in which he emphasises the socio-cultural context of understanding and responding to environmental harm:

"Ultimately the construction of [environmental] victimhood is a social process involving dimensions of time and space, behaviours involving acts and omissions, and social features pertaining to powers and collectivises" (ibid.: 122).

As further noted by White (*ibid.*: 111), this state of affairs in relation to environmental victims reflects “one of the truisms of victimology that being and becoming a victim is never socially neutral”.

In an attempt to reconcile some of the above complexities in conceptualising ‘environmental victims’, one possible solution that has been suggested by commentators (Williams, 2009; White, 2008) is to draw on the UN General Assembly’s definition of ‘victims of abuse of power’ from its 1985 Declaration of Basic Principles of Justice and Abuse of Power (United Nations General Assembly, 1985), which might serve as a useful starting point for ascribing rights to environmental victims. At paragraph 18 the 1985 Declaration definition reads:

“[P]ersons who, individually or collectively, have suffered harm, including physical or mental injury, emotional suffering, economic loss or substantial impairment of their fundamental rights, through acts or omissions that do not yet constitute violations of national criminal laws but of internationally recognized norms relating to human rights”.

The inclusion of victims of abuse of power within the 1985 Declaration was intended to encompass victimisation by the state (Reese, 2000) making this definition particularly relevant from the perspective of victims of environmental harms. This attempt to reconcile the wider victims movement with more ‘specialist’ concerns regarding environmental victims is, it is submitted, an important step, and one which has seen practical application elsewhere: the most significant of which being the application of the US Crime Victims’ Rights Act of 2004 (CVRA)<sup>11</sup> to victims of environmental crime.

Heralded as a major breakthrough by proponents as a more judiciable form of victims’ rights (Doyle, 2008) the 2004 CVRA introduced the concept of victims’ rights into the US penal code for the first time. The Act contains provision for ‘service rights’ for victims (Ashworth, 2000) including the provision of information to them by the justice system, protection and compensation, as well as a procedural rights for victims of crime ‘to be reasonably heard at any public proceeding in a district court involving release, plea, sentencing, or any parole proceeding’.<sup>12</sup> The most significant feature of the legislation, however, is the enforcement mechanisms it creates. Here, individuals or the federal government may assert victims’ rights at the district court level. If the victim or the government are still not satisfied with the enforcement of these rights they may file a petition with the Court of Appeals for a writ of mandamus. A court’s decision to deny any of these rights may also be asserted as an error by the prosecution in the case. Even more significantly, in limited circumstances a victim may move for a new trial on the basis of the denial of their rights.<sup>13</sup> The Crime Victims’ Rights Act does not apply to the states, as it is not an amendment to the Bill of Rights or the US constitution. Nevertheless, the Act was incorporated into the Federal Rules of Criminal procedures, which is followed by all judges in federal criminal cases, in April 2008. The Act does not

<sup>11</sup> 18 U.S.C. § 3771.

<sup>12</sup> 18 U.S.C. § 3771(a)(4)

<sup>13</sup> 18 U.S.C § 3771(d)(4)

give victims the right to sue the federal government for breach of their rights, but remains one of the most robust systems of rights enforcement for victims seen in any jurisdiction.

The first application of the CVRA to victims of *environmental* crime followed an explosion of a BP Oil Refinery in Texas in 2005. In this case the US Fifth Circuit court ruled that the government had violated victims' rights under the CVRA by failing to consult with those locals affected by the explosion (mostly in the form of personal injury and property damage) in the agreement of a plea bargain with BP (Starr, Flack, & Foley, 2008). This was despite the fact that the number of victims stretched into the hundreds and the CVRA neither includes nor, on a standard reading, conceives harm caused by environmental damage. More recently in the case of *W.R. Grace & Co.*, the named company was prosecuted under environmental legislation for 'knowingly endangering' the residents of Libby, Montana, by exposing them to asbestos through mining activities. The federal judge in the case had ruled that 34 prospective victims of these activities (local residents) did not fall under the definition of victim within the Crime Victims' Rights Act<sup>14</sup> and as such excluded them from the trial proceedings. In *Re Parker; U.S. v. U.S. District Court and W.R. Grace & Co.*, Nos. 09-70529, 09-70533 (9th Cir.), the United States Ninth Circuit Court of Appeals reversed this decision, thus confirming that prospective victims of environmental harm are indeed included within the ambit of rights provided under the 2004 CVRA. The case is interesting not only for the specific result, but as a demonstration of the breadth of the term 'victim' and gives weight to the contention that it includes (or should include) environmental crimes even where there is no specific mention of this category of harms within the rights-enabling legal instrument.

## 6 CONCLUSIONS AND WAYS FORWARD

Environmental degradation of all kinds has fast become an accepted reality raising significant challenges across the spectrum of social and physical sciences. As such, it seems likely that the solution to the problems caused by climate change must inevitably come from a meeting of minds between scholars and practitioners from diverse fields of enquiry. This paper is in part a response to the challenges posed by the critical school in its application of concepts usually reserved for 'traditional' forms of officially-recognised (criminal) victimisation to environmental harm, as well as a practical attempt to fill perceived gaps in knowledge on the victims of such harm. The paper also takes its lead from the cultural view of victimisation discussed in the preceding paragraphs. The above overview demonstrates that the time is right for such a discussion as a natural extension of more recent theoretical debates. It is submitted that this is particularly the case given the overriding focus on 'harm' as a central concept in modern literature and policy making concerning victimisation. In sum, the paper demonstrates the likelihood that both present and future victimologists and criminologists will increasingly find themselves presented

<sup>14</sup> 18 U.S.C § 2241-2233.

with the challenges posed by climate change and environmental pollution more generally and, as such, the work of dedicated research into these issues from a victimological perspective must now begin in earnest.

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