

## Wildlife Crime: The Problems of Enforcement

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**Abstract** Environmental and wildlife crime appear recently to be benefitting from an increasing profile amongst those agencies tasked with their control, as well as receiving growing criminological attention. Despite this, those with responsibilities in this area report that it remains marginalised, receiving limited resources and suffering from a lack of political impetus to push such problems higher up the agenda. This is particularly so for those agencies, such as the police, that may be seen to have many more pressing objectives. This discussion paper considers the problems of relying on an enforcement approach to controlling such offences, taking, as an example, those activities that may be termed ‘wildlife crime’, focusing on the situation in England and Wales. Firstly, the legislative framework that criminalises harm or exploitation of wildlife is presented, alongside the main enforcement methods used. Next, the problems facing an enforcement approach are critically considered, the key issues being: under-resourcing and marginalisation, the large ‘dark-figure’ of wildlife crime, the possibility of corruption, the lack of seriousness with which such crimes are viewed, and the lack of deterrent effect. Finally, responses to the problems of enforcement are presented, categorised as either methods to improve enforcement or, as the author advocates, methods which are alternatives to enforcement (such as adopting a crime prevention approach). The paper concludes with suggestions for future research in this field.

**Keywords** Crime prevention · Deterrence · Enforcement · Environmental crime · Wildlife crime

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## Introduction

Crimes committed against the environment and animals other than humans appear to be experiencing an increasing profile. There have been numerous recent efforts amongst criminologists to expand the boundaries of their discipline to include what has been variously termed ‘green criminology’ (e.g. Lynch and Stretesky 2003), ‘conservation criminology’ (e.g. Gibbs et al. 2010; Herbig and Joubert 2006) and ‘environmental criminology’ (White 2008). A debate about this terminology and the scope of such endeavours is beyond the aims of this paper, but key examples include elephant (Lemieux and Clarke 2009) and parrot (Pires and Clarke 2010) poaching and illicit trade in endangered species (Herbig 2010; Schneider 2008; Wellsmith 2010). This growing interest has also resulted in a number of recent publications on environmental crime and green criminology, including Bierne and South (2007) and White (2008, 2009, 2010). However, it has been noted (Beirne 1999; Cazaux 2007; Mailley and Clarke 2008) that mainstream criminology has shown little interest in offences against nonhuman animals and it may be that environmental harm remains a niche interest amongst criminologists.

However, concerns over the state of our environment remain significant, permeating many aspects of society. As such, the profile of environmental crime has also been increasing, particularly for those agencies tasked with tackling such offences. The second Annual Environmental Crime Conference, 2009, hosted by the UCL Centre for Security and Crime Science and sponsored by the Environment Agency for England and Wales, attracted over one hundred delegates, with speakers representing the Police, the Environment Agency (EA), the Department for Environment, Food and Rural Affairs (Defra), the UK Environmental Law Association (UKELA) and a handful of academics. Presentations and discussions predominantly considered (a) the profile of environmental crime within various agencies and (b) techniques and approaches for environmental crime control. It appeared a generally held opinion that environmental crime was taken seriously by those involved in tackling it, but that there were limited resources and political impetus to push this topic higher up the agenda, particularly for those agencies, such as the police, that are tasked with myriad other laws and regulations to uphold. The recent change in government in the UK may impact upon this further.

Proceedings from the conference suggested that most attention was being paid to enforcement activities (predominantly intelligence-driven identification of prolific and organised offenders, evidence gathering, arrest and prosecution); resulting in a preoccupation with the role such enforcement could have on reducing offences against the environment (Wellsmith 2010). In this case, reduction is assumed to result from the incapacitation of prolific offenders, the disruption of organised networks and, most significantly, deterrence. Deterrence is seen to act on both the individual offenders (who will be discouraged from committing further environmental crimes) and the wider public, who will be deterred from engaging in such activities due to the threat of punishment, as well as being moralised against environmentally harmful activities as the courts reinforce the seriousness of such offences (de Prez 2000; Du Rées 2001). However, when enforcement is weak, such reductions will not ensue. Further, we may question whether even strong, effective enforcement can offer such reductivist benefits. It is contended that criminology can actively contribute to endeavours in the field of environmental crime reduction through a healthy scepticism about the effectiveness of deterrence through

prosecution and sentencing, and the exploration of alternative approaches, such as situational crime prevention

This paper therefore considers the problems of relying on an enforcement approach for controlling offences against the environment. Taking ‘wildlife crime’ in England and Wales as an example set of criminal behaviours, the terminology is briefly defined and the legislation relating to such offences is set out. Agencies involved in enforcement activity are presented along with examples of court disposals, using published research and publically available material to illustrate the problems of relying on an enforcement approach. Responses to these problems are then presented, firstly considering how enforcement can be improved, secondly considering alternative approaches. Finally, suggestions are made for key areas of future research that may help bring conservation, crime control and academia together as they focus on ways to reduce environmental harms.

## Environmental and Wildlife Crimes

The terms environmental crime and wildlife crime may have different connotations depending upon their use and underpinning philosophies (White 2003). Within the field of eco-criminology,<sup>1</sup> it is environmental *harm* that is considered; the approach advocates moving beyond strict, legalistic interpretations of ‘crime’ in order to encompass much broader conceptions. White (2008) argues there are three green theoretical frameworks: environmental rights and environmental justice; ecological citizenship and ecological justice; and animal rights and species justice. Whichever framework is followed, behaviours of concern will not be limited to those defined as ‘crimes’ in any given country. However, it is likely that behaviours which *are* proscribed by law would be included in such definitions. It would seem most useful, therefore, to take criminalised harms against the environment as a starting point for research and intervention.

There is no fixed definition of environmental crime, and the behaviours encompassed are varied including illegal waste discharges, fly tipping and illegal logging. Environmental law includes offences relating to neighbour noise, graffiti, littering, dog mess, wildlife and countryside, planning and rights of way (Environmental Law Association 2009a, b), but many commentators concentrate on environmental offences concerning pollution and waste. In legal terms, then, the concept of the environment is much narrower than that considered by eco-criminologists, and offences involving nonhuman animals are rarely considered (perhaps with the exception of the illicit trade in endangered species, or the presence of nonhuman animals that may cause harm to the environment or public health). This paper concentrates on activities that may be labelled as ‘wildlife crime’ for three main reasons: (1) a narrower range of offences allows for a more focused discussion; (2) offences involving nonhuman animals are less apparent in the literature, particularly offences other than illicit international trade; (3) it is an area of particular interest to the author that has both global and local dimensions.

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<sup>1</sup> The use of the differing terminologies for the study of harm to the environment and animals other than humans by criminologists has not yet been resolved. All the key terms have their weaknesses, but for the purposes of this paper the term eco-criminology will be used, with due recognition of the equivocal nature of such labels

The role of nonhuman animals<sup>2</sup> in society may be variously debated and whilst it may be argued that many harms are perpetrated against animals, this paper will be purposely limited to a consideration of those criminal offences falling within the definition of wildlife crime as set out by the National Wildlife Crime Unit (2009: no page): “one or more of the following: the illegal trade in protected species, crimes involving native species that are protected or of conservation concern, and the cruelty and persecution of wildlife species.” This definition does not appear to include harms against animals that are not considered ‘wild’, such as companion (‘pet’) or farm animals. Legislation exists in the UK that provides some degree of protection for these non-wild animals, for example the recent Animal Welfare Act 2006, The Pet Animals Act 1951 (relating to pet shops) and legislation relating to animal boarding, riding and breeding establishments (for more information see [www.defra.gov.uk](http://www.defra.gov.uk)). Much of this legislation is investigated by organisations other than the police, including local authorities and charitable organisations such as the Royal Society for the Prevention of Cruelty to Animals. That cruelty and abuse of domesticated and farmed animals is subject to predominantly regulatory legislation, suggests an area of concern that is marginalised and worthy of further attention, but which is excluded from this paper.

Wildlife crime can be considered as occurring at the micro-level (such as subsistence poaching and individual acts of cruelty), meso-level (such as domestic trade in resident vulnerable species and organised illegal hunts) and macro-level (notably import and export of endangered species for international trade). It would appear from studying the conservation literature and media reporting, that most attention is paid to macro-level offending (which is assumed to be highly organised and associated with drug and other illicit trafficking, see, e.g. Cook et al. 2002; Cowdrey 2002; Zimmerman 2003) and to particular iconic species (White 2005) or even individual animals (e.g. the alleged killing of the Emperor of Exmoor, a famously large red stag deer, which was reported widely in the UK and even abroad, e.g. BBC News (2010), even though the shooting does not appear to have been illegal).

Wildlife offences in England and Wales are established by a range of statutes and regulations. The main provisions are summarised in Table 1.

The main aim of legislation such as that summarised in Table 1 is to prevent or reduce certain behaviours (i.e. those things that are made illegal). On the face of it, these seem to be activities that cause significant pain or distress to wildlife (predominantly mammals) or result in loss of biodiversity, except where such activities may be viewed as a kind of ‘self defence’ (e.g. where there is a threat to public health or to property, including livestock). That certain species (notably mammals and those which are rare) are subject to such protection, whilst others are not only excluded, but are actively reared to be subject to some of the activities which would otherwise be unlawful, is of great concern to those writing from a species justice, abolitionist or animal rights perspective (e.g. Francione 1996). But although the author has sympathy with these philosophies, the purpose of the present paper is not to critique the existing legal framework, but rather to assess the ability of an enforcement approach to reduce existing criminalised behaviour.

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<sup>2</sup> Another contentious term, writers in this field have found a need to distinguish human animals and nonhuman animals, but have not identified a satisfactory nonspeciesist label. Referring to nonhuman or animals other than humans, tends to raise the importance of humans over other animal species (see, e.g., Beirne 1999), thus there is a tendency to fall back on the more common use of ‘animals’ to exclude humans, which will be adopted for the remainder of this paper.

**Table 1** Selected Wildlife Crime Legislation for England and Wales

Act	Relevant provisions	Maximum penalty
Control of Trade in Endangered Species (Enforcement) Regulations 1997 as amended by COTES (Enforcement) (Amendment) Regulations 2005 and 2007	Enacts CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) and EU regulation (Council Regulation 338/97) into domestic law. Is an offence to import, export, introduce from the sea or trade in Appendix I listed species or their parts (with very limited exceptions) or Appendix II listed species or their parts without a licence.	Varies, but maximum across all types of offence is on indictment unlimited fine and/or 5 years imprisonment.
Wildlife and Countryside Act 1981 as amended, in particular by Countryside and Rights of Way Act 2000	Covers various crimes involving native species, endangered or of other conservation concern protecting both the species and their habitats. Particular coverage for all wild birds makes it an offence to kill, injure or take a wild bird; possess a wild bird or eggs; destroy or take eggs; destroy, damage or take a nest in use/in process of use (or at all times for certain species); advertise or sell wild birds/eggs; exhibit in a competition (except under licence); use prohibited methods to take, injure or kill (e.g. poisoning, snaring). Note this relates only to non-game birds, who may be hunted during given seasons.	(WCA 1981) Varies. For most offences maximum penalty is a level 5 fine and/or 6 months imprisonment. Some offences (summary and triable either way) specify only a fine.
Conservation (Natural Habitats, &c.) Regulations 1994	Non-bird species are protected if they are rare or vulnerable native species (e.g. red squirrels, bats; inclusions are revisited every 5 years). It is an offence to kill or injure; take, capture or keep; destroy, damage disturb or prevent access to place of shelter; disturb bats and their roosts; sell or advertise for sale protected species or products derived from them; use prohibited methods to take, injure or kill; hunt with a dog.	A s14 (introduction of new species) or s19XB(4) (falsely pretending to be wildlife inspector) offence on indictment can attract maximum unlimited fine and/or 2 years imprisonment.
Countryside and Rights of Way Act 2000	Exceptions exist for nursing of ill/injured wild animals and birds; mercy killing if injured; taking or killing (with permission or under general licence) to protect public health and safety, prevent spread of disease, development of science, education or conservation, protection of agriculture, property, fisheries (certain species); sale/trade of licensed captive-bred species.	
Natural Environment and Rural Communities Act 2006		

Table 1 (continued)

Act	Relevant provisions	Maximum penalty
Protection of Badgers Act 1992	<p>Provisions also cover offences relating to introduction of new (non-resident) species.</p> <p>Protection of particular species – badgers; e.g. baiting, snaring, hunting, interfering with setts, sales/trade.</p> <p>Exceptions exist as above (nursing, accident, etc.), protection of crops, poultry or other property (usually with licence unless immediate concern). Licences also issued for taking or killing for purposes of education, conservation, ringing, prevention of damage or disease.</p>	Varies by offence, but maximum in Act is level 5 fine and/or 6 months imprisonment
Deer Act 1991	<p>Relates to limits on the killing/taking of deer, including offences of poaching; introduction of a closed season (for certain deer); prohibition of night killing; prohibition of certain methods of taking/killing; sale of venison without licence</p>	Level 4 fine and/or 3 months imprisonment.
Conservation of Seals Act 1970	<p>Excludes ‘farmed’ deer (killed with owner’s permission) and protection of crops and other property.</p> <p>Sets out limits on methods and times for killing/taking of seals (as an act of protection and conservation).</p>	Level 4 fine.
Wild Mammals (Protection) Act 1996	<p>Offence to cause unnecessary suffering to wild mammals (e.g. burning, stabbing, kicking, drowning, etc.)</p>	Level 5 fine and/or 6 months imprisonment.

Hunting Act 2004

Level 5 fine.

Somewhat controversial legislation enacted only as a result of invoking the Parliament Act (allowing the passing of legislation without the approval of the House of Lords). Makes it an offence to hunt wild mammals with dogs (including fox hunting and hare coursing). Wild mammals include any bred or tamed for the purpose of hunting or in captivity. Also an offence to allow land to be used for an illegal hunt.

Exceptions include stalking or flushing out to prevent/reduce serious damage to livestock, crops, fisheries or other property, or for meat for human/animal consumption or for a field trial, on conditions that landowner has given permission, not more than 2 dogs are used and the mammal is shot by a competent person as soon as possible.

Council Directive 79/409/EEC on the Conservation of Wild Birds (now replaced by Directive 2009/147/EC)

n/a see relevant legislation

Aka Wild Birds Directive. WCA 1981 amended to incorporate provisions, thus extending protection to all wild species of birds resident in or visitors from an EU member state.

Conservation of Habitats and Species Regulations 2010

n/a see relevant legislation

Consolidates amendments made to Conservation Regulations 1994, thus also enacts the EU Habitats Directive (Council Directive 92/43/EEC). Protects rare/vulnerable species listed for protection in Europe.

(Defra (2010); Joint Nature Conservation Committee (2010); Selected legislation)

## Wildlife Crime Enforcement in England and Wales

Wildlife crime legislation in England and Wales is enforced by the regional police services. All police forces in the UK now have at least one Police Wildlife Crime Officer (PWCO), although they may often perform this role on a part-time basis alongside other tasks, or routine patrol. A thematic inspection to assess the arrangements for prevention and enforcement of wildlife crime in Scotland noted that the PWCO role, whilst clearly specialist, was not actually treated as such, in comparison to other specialist tasks such as fraud investigation (Scottish Government 2008). In addition, the current austerity measures and funding reductions for public services in the UK will negatively impact police budgets (Chancellor of the Exchequer 2010), and there are already reports of police forces reducing PWCOs, amongst other non-core policing roles (see, e.g., Hastings 2010).

Investigations are also carried out by other agencies including the independent charities the Royal Society for Protection of Birds (RSPB), the Royal Society for the Prevention of Cruelty to Animals (RSPCA) and the Environmental Investigation Agency (EIA). Information gathered by the EIA and RSPB (as well as other organisations such as the League Against Cruel Sports) is passed to the police and/or RSPCA. Prosecutions against wildlife suspects are brought in England and Wales by either the Crown Prosecution Service (CPS) (to whom files are passed by the police – who do not themselves have any prosecutorial powers) or the RSPCA who bring private prosecutions under s6(1) of the Prosecution of Offences Act 1985. Offences relating to import/export of wild animals (predominantly COTES offences) may be investigated by the police or the UK Border Agency (UKBA), prosecutions again being brought by the CPS.

The National Wildlife Crime Unit (NWCU) is a government-funded agency that employs the National Intelligence Model (NIM) of policing. It does not carry out operational policing or bring prosecutions, but rather assists in prevention and detection of wildlife crime through gathering data and intelligence, performing tactical and strategic analysis and co-ordinating and facilitating co-operation across other agencies and countries.

The Partnership Against Wildlife Crime (PAW) is based on a crime reduction partnership model. Through the partnership approach, agencies and organisations other than just the police are tasked with recognising the role they can play in the reduction of crime, facilitating data sharing, and encouraging inter-agency working. Partnerships can thus draw on the resources, strengths and areas of responsibility of a number of relevant agencies. PAW also undertakes awareness raising, publicity and some training (PAW 2010). The partnership consists of a steering group (selected government agencies including the police), Secretariat (Defra) and a number of working groups. Partner organisations are listed on the PAW website ([www.defra.gov.uk/paw/partner/default.htm](http://www.defra.gov.uk/paw/partner/default.htm)) and number 179 (last updated October 2007).

The executive summary to the NWCU 2010 report points out that the NWCU is the only unit in the UK fulfilling the role of conduit between those engaged in wildlife crime enforcement. As such it has helped the UK to “gain an enviable worldwide reputation for the coordinated and cohesive manner in which it combats wildlife crime” (NWCU 2010: 1). In 2009/10, the NWCU dealt with 10,000 incident reports (compared to 3,832 in 2008/09), processed 3,477 intelligence logs and was involved in investigations that led to the seizure or forfeiture of £400,000 worth of criminal gains. Compared to the previous year, it conducted 14 times more database checks, received five times as many requests for analytical products and increased its staffing levels (NWCU 2010: 1-2).

The NWCU, PAW and RSPB include on their websites or in their annual reports, examples of successful prosecutions. In 2009/10 NWCU recorded 115 convictions



compared to 51 the previous year, an increase they attribute to better recording practices (NWCU 2010). In relation to the 3,477 intelligence logs processed, 70% resulted in intelligence being recorded only (at this stage), 15% relate to ongoing investigations, 4% resulted in seizure by the UKBA and 3% resulted in convictions. A further 2.1% now have court cases pending. Finally, the NWCU reports 9,999 incidents relating to possible wildlife offences (although these may not all be crimes).

### **The Failure of Enforcement**

There have been many calls for tougher enforcement (e.g. Akella and Cannon 2004; Engler and Parry-Jones 2007; Garstecki 2006; Partnership Against Wildlife Crime PAW 2010), harsher sentences and for wildlife crime generally to be taken more seriously. What then is tough enforcement trying to achieve and why is reduction of wildlife crime through enforcement seen to be failing?

The reductivist aims of environmental legislation are clearly presented and critically assessed by Du Rées (2001). Reductions in unwanted behaviours are assumed to be achieved predominantly through ‘general prevention’; that is general deterrence and the longer-term impact on public morals, or what people believe is ‘wrong’ and ‘right’. In order to determine the likelihood of criminal law having such effects, Du Rées (2001: 109) assessed the “regulatory acumen of those applying the law, the likelihood of being sanctioned for offences and the severity of sanctions imposed” in relation to Swedish legislation relating to environmentally hazardous activities. Finding, in this case, that regulatory acumen was not a major problem, she therefore assessed the certainty and severity of punishment for such offences (using predominantly questionnaire responses from a number of supervisory agencies, police boards and prosecutors). She found that both of these were limited in practice, thus there was little general deterrence. Sentencing was often seen as too mild and supervisory agencies were perceived as ambivalent or tolerant of offending, giving the message that environmental crime is not a serious offence, thus there was also unlikely to be a positive moralising effect on the general public.

A different approach to the same issue was taken by Akella and Cannon (2004), who used case studies in four countries to consider the deterrent effects of conservation legislation. Using an economic deterrent model (citing Sutinen 1987), they estimated the enforcement disincentive against particular crimes for each case study. Calculations were made for the probability of detection, arrest given detection, prosecution given arrest, conviction given prosecution, value of fine and time from detection to fine (multiplied by a negative interest rate). In other words, they were assessing the certainty, severity and celerity of deterrence to calculate an economic risk measure that could be compared to the benefits of offending. For all four of their case studies, even when very generous estimates were made for unknown probabilities (in two cases the probability of detection could not be estimated, so was set at 1) the risk of punishment was low and in the two cases where they were more confident in their assessments, it was below 1 per cent. Overall the economic disincentive varied from \$0.09 to \$6.44, whilst profits from offending varied from \$70.57 to \$91,967.36.

Both of these studies focused on environmental rather than wildlife crime and the Akella and Cannon (2004) research took place in countries of biodiversity importance, which are often developing countries. The punishment structures, including fine tariffs (i.e. the severity) and the certainty of detection, prosecution and conviction may be different for other forms of crime and other jurisdictions.

The best source of wildlife incident data is the NWCU annual report. It is difficult to calculate attrition rates from the data presented (see above), but it seems safe to assume, given the probably large proportion of offences not resulting in incidents or intelligence reports, that these are low, like those environmental crimes researched above. As it is well established in criminology that attrition rates for traditional crime are generally low, even more so for 'hidden' or 'victimless' crime, there is every reason to believe that this is also the case for wildlife crime in England and Wales.

Most authorities claim wildlife crime, particularly CITES-related offences (i.e. illicit trade in endangered species), to be big business. The global *legal* trade in flora and fauna (which includes timber and fisheries) in the 1990s was estimated by Cowdrey (2002) at around US\$159 billion in exports. A large range of often unsubstantiated estimates have been published regarding the value of the illicit trade in endangered species (see, for example, Damania and Bulte, 2001; Ong 1998; Zimmerman 2003), suggesting that a global annual estimate of \$9-\$11 billion (NWCU 2009) is unlikely exaggerated (Wellsmith 2010). Seizure and forfeiture of the proceeds of crime can also provide a useful indicator of the rewards available to wildlife criminals. Examples include £106,000 (seized in relation to an offence of going equipped for theft), £50,000 (TAMs), £18,000 (birds of prey), £12,000 (primates and mammals), £2,155 (taxidermy), £1,400 (lemur), £800 (goshawk), £500 (caviar) and £200 (barn owls) (NWCU 2010). Whilst the individuals involved in these cases have had these proceeds seized (some cases are currently ongoing), thus not gained the benefits of their offending, many others who remain unconvicted will have reaped similar, or greater, rewards, for potentially very little risk (Schmidt 2004; Schneider 2008).

These concerns reflect those of enforcement agents world-wide, including those attending the 2009 Annual Environmental Crime Conference. It seems, therefore, that enforcement of existing legislation is not producing a sufficiently deterrent effect. The questions, then, are why might this be and what can be done?

## Problems of Enforcement

Many authors, enforcement agents, conservationists and researchers have suggested problems that hamper the effectiveness of existing enforcement methods. These are also echoed in the research carried out by Du Rées (2001) and Akella and Cannon (2004). These can be summarised as:

1. Under-resourcing and marginalisation
2. A large dark figure/true extent not known
3. Corruption
4. Crime not taken seriously (or not even viewed as criminal)
5. Overall lack of deterrent effect (which will be affected by points 1-4)

Each of these issues impacts upon the effectiveness of enforcement, but can also impact upon each of the other issues. For example, under-resourcing may lead to under-paid staff, which increases the chances of corruption (Akella and Cannon 2004). Alternatively, if wildlife crime is not viewed as serious, fewer resources are likely to be channelled into tackling it. Additionally, the first four problems will all impact negatively upon the overall deterrent effect of the legislation in question. Quite simply, if no money is put into detecting wildlife crime, if there is little publicity about it, if most of it is not reported, if those tasked with its reduction do not care or are willing to turn a blind eye and if sentences are derisory, then those who may consider committing crime against wildlife will have no reason not to.

Considering that enforcement is the predominant method employed to control wildlife crime, these problems, which will now be considered in more detail, are significant.

### 1. Under-resourcing and marginalisation

Under-resourcing predominantly relates to enforcement and investigation agencies and is regularly cited as a major problem (e.g. Brack 2002; Garstecki 2006; McMullan and Perrier 2002; Schmidt 2004). This includes insufficient numbers of personnel as well as a lack of basic material resources, such as vehicles and other necessary equipment. It may further result in a lack of data collection and sharing tools, access to forensic analysis and more advanced assistive technology (such as surveillance equipment) (Garstecki 2006). Under-resourcing can also manifest as insufficient training for enforcement agents, prosecutors and the judiciary thus reducing their capacity to effectively enforce legislation and sentence appropriately. As Akella and Cannon (2004) point out, although calls may be made for enhanced technology, there is little point if staff are not trained in its effective use.

Even when specialist roles are created and training is provided, under-resourcing and marginalisation may make such jobs unattractive (because of a lack of pay or support). Indeed, such positions may be shunned as not living up to the exciting image portrayed of enforcement roles or not dealing with 'real crime' (Fyfe and Reeves 2008). Further, the majority of crimes dealt with, such as illegal hunts or badger baiting, involve small scale offending (as opposed to the organised and transnational nature of endangered species trade), and where agents may receive little support from the local community (e.g. McMullan and Perrier 2002).

In practical terms, limited funding means that organisations such as the NWCU (in liaison with other agencies) set biennial wildlife crime priorities. The current priorities are: badger, bat and Raptor persecution; CITES-related offences (particularly caviar, ivory, ramin, tortoise and traditional Asian medicines (TAMs)); freshwater pearl mussels; and poaching. Therefore, the exemplary work of this unit and the agencies it supports cannot be extended to the full range of wildlife offences.

The current 'age of austerity' is likely to only make this situation worse. Indeed, despite the NWCU being credited by the WWF as being instrumental in doubling the recorded conviction rate for wildlife crime in the UK in 2009, there are reports that government funding to the unit will be reduced, or even stopped, as part of the budget cuts in the coalition government's Comprehensive Spending Review (Chancellor of the Exchequer 2010; World Wildlife Fund WWF 2010).

### 2. Dark figure

The RSPB produces an annual report of bird crime reported to them, and since 2009 the NWCU has produced an annual wildlife crime and strategic (priority setting) reports for the UK. Reported wildlife crime data should be forwarded to the NWCU, which is therefore in the position of being able to produce the best picture of wildlife crime in the UK. These data are not included in annually published Home Office Statistics. However, it has been estimated that only around ten percent of known *environmental crimes* end up in court and that a large proportion of offences will never come to the attention of authorities (Select Committee on Environmental Audit 2004). If one considers the nature of wildlife offences, it is probably safe to conclude that the attrition rate is likely to be even higher.

If a large proportion of wildlife crime is never discovered, reported or recorded, this will have a significant impact on the deterrent effect of enforcement practices even if highly punitive sentences were passed against those who were convicted. Wildlife

crime is technically a 'victimless' crime (animals cannot in English law be considered victims of crime) so there is no direct human victim to report the offence to the authorities. As such, data relating to wildlife crime is built up from pro-active investigations and checks, intelligence gathering, accidental discovery and concerned citizen reports. There can be no victimisation survey to supplement the paucity of official recorded crime data as there is for traditional forms of crime, and it is highly likely that the vast majority of wildlife offences are never known to anyone other than the perpetrators. In relation to offences of illicit trade, the ease with which items can be globally transported (particularly within the 'borderless' EU), the difficulty of recognising particular, protected species or their parts and the apparent links with organised crime and experienced illegal traffickers all impact upon the likelihood of offences being discovered and recorded (Magistrates' Court 2002; Schmidt 2004).

Not knowing the true extent or patterns of wildlife crime is problematic for enforcement in a number of ways. Firstly, it is evidence of the low risk of detection. Secondly, if the extent of crime is underestimated this may impact upon the severity with which it is viewed, thus the level of punishment it attracts. Thirdly, if the amount of wildlife crime is severely underestimated and the true nature of it unknown, public awareness and support for its reduction is likely to be low, leading to continued marginalisation. Fourthly, if the extent and nature of offending is unknown, enforcement cannot be effectively targeted, strategic and tactical co-ordination will be limited and other approaches, such as problem-oriented analysis, cannot be employed. Finally, without suitable data there can be no performance management and evaluation (Akella and Cannon 2004). All of these issues are likely to impact on the funding provided for enforcement activities; if it cannot be shown there is a problem, resources will not be made available to tackle it.

### 3. Corruption

Corruption is raised as a problem facing enforcement by many commentators (Akella and Cannon 2004; Garstecki 2006; Smith and Walpole 2005), but this is usually in relation to activities in developing countries. It is not known to what extent corruption of officials (working in enforcement, detection, prosecution, the judiciary or policy making) may occur in relation to wildlife crime in England and Wales, thus this issue will be considered in less detail. However, it is important to note that Du Rées (2001) identified a number of common practices among enforcement/supervisory agencies in her Swedish research that could be classed as techniques of neutralisation. This was in part compounded as these agencies often had a dual role supervising, providing guidance and issuing licences, as well as investigating and reporting for prosecution. Thus there was often a relationship with those suspected of committing crimes. Neutralisation techniques noted were: there being no victim or harm caused (a technique also noted by de Prez 2000, in relation to defences against prosecution for environmental crimes); there being little point in taking any action; the 'crime' being accidental; and concern over the negative effects that could result from a prosecution. These included negatively affecting the reputation of an area or of a company (resulting in possible loss of jobs) and of harming the working relationship, which might be otherwise utilised to bring about compliance. If further investigation of working practices in England and Wales with respect to wildlife crime was carried out, such neutralisations may be apparent.

Corruption and neutralisation will result in weaker enforcement, as crimes are not recorded and offenders are not brought to justice. However, working practices such as those described by Du Rées (2001) may actually be more effective alternatives to

enforcement proceedings in reducing wildlife crime. Further research is required in this area.

#### 4. Wildlife crime not taken seriously

One of the most common complaints heard regarding the problems facing enforcement is that policy makers and the judiciary do not take wildlife (or other environmental) crime seriously enough (Select Committee on Environmental Audit 2004). Despite the environment currently attracting significant attention, the resources provided for enforcement activities and the sentences passed upon conviction suggest that environmental crime remains towards the bottom of a large pile of other concerns, such as more traditional crimes (e.g. personal violence, gun crime and drugs). If this is the case for environmental crime generally, the situation for wildlife crime is likely worse. The under-resourcing and marginalising of wildlife crime enforcement over many years, which has been discussed above, may be taken as further evidence that, as the Select Committee on Environmental Audit stated: “environmental crime still remains in some areas far from the priority it ought to be” (2004: para 5). Thus the cycle of marginalisation, under resourcing and lack of attention to wildlife crime continues, compounded by the hidden nature of such offending.

It is possible that environmental and wildlife crimes are not taken seriously because so few prosecutions are brought. In 2004, it was estimated that about 10,000 environmental prosecutions were brought annually compared to, for example, 33,000 for burglary (out of a total of 1.93 million people proceeded against for criminal offences in 2002/03) (Select Committee on Environmental Audit 2004: para 8). The NWCU (2010) reported 115 convictions for wildlife offences in 2009/10, although these figures do not appear complete. This estimate reflects the very large dark figure of environmental crimes, not the true extent of offending or harm they cause. The hidden nature of wildlife crime, therefore, negatively affects how serious a problem it is seen to be. To influence policy in this area, efforts to establish accurate estimates of the extent of offences against wildlife should be prioritised.

Further evidence often presented to support claims that wildlife and environmental offences are not taken seriously relates to the level of punishment given to those who are convicted. This was one of the key points made by Akella and Cannon (2004) in relation to environmental crimes in biodiversity-rich areas. Table 1 includes the *maximum* sentences for the various offences listed. It can be seen that the majority of offences are summary (tried in the lower, Magistrates’ Court), thus maxima are limited to a level five fine (currently £5,000) and/or 6 months imprisonment, although some offences attract a lower limit and no custodial provision. A limited number of offences, most notably COTES offences are triable either way (they *may* be heard in the higher, Crown Court) and attract maximum sentences of an unlimited fine and/or five years imprisonment. Whilst the legislation discussed covers a wide range of offences, the summary fines clearly do not reflect the serious harm, pain and distress that can be caused by wildlife crime (as a point of comparison, assault occasioning actual bodily harm contrary to s47 of the Offences Against the Person Act 1861, is triable either way, with a maximum penalty in the Crown Court of an unlimited fine and/or five years imprisonment). Even when the legislation allows for more severe punishments, it is the sentences passed in court that reflect the true seriousness with which such crimes are viewed, hence the judiciary have an extremely important role (Akella and Cannon 2004).

In order to support consistency in sentencing, Sentencing Guidelines are produced for the judiciary in England and Wales by the Sentencing Council. Crimes against

wildlife are currently only listed in the general Magistrates' Court Guidelines, and relate to offences of animal cruelty under the Animal Welfare Act 2006 ss4, 8 and 9. There remains, therefore, little *current* guidance as to how to sentence these rarely prosecuted offences. However, there is some evidence that cruelty offences are taken relatively seriously. For example, the starting point sentence for an offender who has (or has attempted to) killed, tortured or baited a protected animal, used for or permitted fighting, or engaged in prolonged neglect, is 18 weeks custody, with a suggested range of 12 to 26 weeks (Sentencing Guidelines 2009: 22). Environmental crimes (in the main relating to pollution and waste offences) are also included in this guidance. Magistrates are mandated to pass exceptional fines (of up to £20,000) for certain environmental offences and custodial sentences may also be appropriate (see Sentencing Guidelines 2009, for further details). The seriousness of environmental crimes is reiterated and Magistrates are advised that: "The sentence should...take account of any economic gain from the offence; it should not be cheaper to offend than to take the appropriate precautions" (Sentencing Guidelines 2009: 182). Whilst the guidelines include discussion of the private individual offender, this approach is clearly targeted at the corporate offender, as they go on to discuss the need for the fine to have "real economic impact" and "together with the bad publicity...bring home to both management and shareholders the need to improve regulatory compliance" (Sentencing Guidelines 2009: 183). This approach is less suited to tackling wildlife crimes, which are much less likely to be associated with corporate activities.

Earlier guidance produced by the Magistrates' Court Association is more comprehensive and includes an insert on sentencing for wildlife trade and conservation offences (Magistrates' Court 2002). Again the seriousness of these offences is reiterated as the guidance calls for strong penalties that reflect the harm caused by such crimes. Even in these guidelines, however, it was recognised that the punishments being dispensed were not sufficient to act as a deterrent. Indeed de Prez (writing in 2000) analysed court proceedings relating to environmental prosecutions in England and Wales and concluded that: "despite the common belief that environmental concerns are no longer taken for granted, routine trivialisation of environmental offences still occurs in the lower courts" (de Prez 2000: 65). Similar concerns are also raised in relation to wildlife offences, particularly for that most discussed area, illicit trade in endangered species (e.g. Lowther et al. 2002).

In support of such arguments, most commentators refer not to the maximum sentences provided in the legislation, but rather the, usually much lower, actual sentences passed (e.g. Garstecki 2006; Jenkins 2008; Lowther et al. 2002). Lowther et al. (2002) provide examples of the discrepancy between punishments received and maximum sentences available for COTES offences (1998-2000). For instance, the possession (for sale) of 138 shahtoosh shawls (made from critically endangered Tibetan antelopes) with a value of £353,000 resulted in a fine on conviction of £1,500 (the maximum available was £5,000 and/or 3 months imprisonment). In this case, neither the actual nor maximum sentence seems sufficient when compared to the value of the goods being sold. A further example from Lowther et al. (2002) details a case of forging CITES permits and trading in illegal taxidermy specimens, for which the offender received six months imprisonment, three months of which were suspended (the maximum COTES sentence was an unlimited fine and/or two years custody and the maximum Forgery Act sentence was ten years imprisonment). RSPB (2009) data relating to bird crime show a greater range of disposals being employed, such as low level fines/costs (e.g. £125 for the illegal possession of 12 wild birds),

community sentences and curfews (e.g. an 80 hour community service order and 28 days curfew for illegal possession of 466 wild bird eggs and eight eggs of a Schedule 1 species<sup>3</sup>) and custody (e.g. five weeks for intentionally killing nine protected birds). Longer custodial sentences were regularly suspended (RSPB 2009).

The difficulties facing sentencers in relation to wildlife crimes are further compounded by the lack of specialist training in relation to such offences, and the difficulties in assessing the harm that has been caused (Magistrates' Court 2002). What value is placed on the life of a rare bird or bat, for example? How do we quantify the impacts of reductions in biodiversity? It is possible to estimate these costs, as exemplified by sentencing practices in Finland (see Garstecki, 2006). Indeed, the Magistrates' Court Association (2002: 4) guidelines relating to wildlife crime stated that "a better understanding of the true environmental costs of these crimes" would lead to more triable either way offences being committed to the Crown Court, which has greater sentencing powers (albeit, this would not apply to those summary only offences in the Wildlife and Countryside Act 1981).

The evidence presented in relation to punishing wildlife offenders is generally used to show the 'derisory' nature of the sentences passed. Whilst there are clear examples of this, more up-to-date and comprehensive data, such as that compiled by the RSPB, suggest that, particularly for nationally based offending (as opposed to international trade offences), a wider range of sentences are being employed. However, whether such sentences can have a deterrent effect, remains an unanswered question.

#### 5. Lack of deterrent effect

All of the issues discussed above will impact upon the ability of legislation to exert a deterrent effect. Even when enforcement is trumpeted as successful, there is little evidence that crime is reduced accordingly. For example, the Guardian newspaper recently published figures relating to convictions under the Hunting Act 2004, as supplied during parliamentary questions (Guardian 2010). These show convictions to be at their highest since the legislation was passed, with 57 in 2009. The news is reportedly welcomed by animal welfare groups, including the International Fund for Welfare, as showing the legislation is enforceable and can be used effectively. However, if the aim of criminalising hunting with dogs was to prevent such activities (which surely it must have been), then *increasing* convictions, after 5 years in force, could in fact be indicative that the Act is failing, as people continue to hunt. Clearly, the situation is more complicated than this, as increasing convictions can also result from increased reporting, detections and successful prosecutions. It may also be the case that a number of would be hunters have chosen not to break the law; in which case hunting – a previously legal activity – will have decreased. However, it is worrying that an increase in convictions is heralded as a triumph, again evidencing a preoccupation with catching people for breaking the law, as opposed to reducing the harm caused by such activities (Wellsmith 2010).

As has been discussed, the requirements for successful deterrence do not seem to be met for wildlife crimes. The dark figure of wildlife crime is generally believed to be large (e.g. McMullan and Perrier 2002) (thus there is little perceived certainty of being detected and convicted) and the severity of the punishments given to those few offenders who are convicted is often considered low in relation to the harm caused and/or the rewards gained. Further, decades of criminological research suggest that

<sup>3</sup> See <http://www.legislation.gov.uk/ukpga/1981/69>

reductivist sentencing based on deterrence is unsuccessful in reducing crime rates. This same research suggests that certainty of punishment is more important than severity in achieving deterrence, yet certainty is the most difficult element to control. Further, people are more deterred by the sanctions of a personally relevant collective, than they are by the sanctions of the criminal justice system to their actions (see Braithwaite 2002; Chan and Oxley 2004; MacKenzie 2002; Tittle 1969; Zimring and Hawkins 1973).

This raises the question, therefore: why do those mandated to prevent wildlife (and other environmental) crimes seem so preoccupied with blaming a lack of success on weak enforcement, rather than recognising that even with improvements, enforcement activities alone are unlikely to reduce such offences? Instead, enforcement should be seen as just one response to the problem.

### Other Issues

Whilst the majority of issues regarding enforcement can be seen to fit into the five points above, there are other points that should also be mentioned. Firstly, but beyond the scope of this paper, there is an argument that most wildlife (and environmental) offences are really regulatory or technical offences, as opposed to crimes (McMullan and Perrier 2002), which affects how morally culpable prosecutors, the judiciary and the general public perceive the infringers to be (Magistrates' Court 2002; Select Committee on Environmental Audit 2004). Some authorities agree that at least some of those behaviours currently criminalised should be dealt with using alternative, non-criminal, regulatory frameworks (see, for example, Gunningham and Grabowsky 1998; McMullan and Perrier 2002) and tailored enforcement (Fortney 2003).

Further, it has been pointed out in relation to the illicit trade in endangered species (Wellsmith 2010), that even if trade bans (such as CITES) are successful in controlling exports, poaching is not necessarily reduced (Cantu Guzman 2007; Lemieux and Clarke 2009; Smith et al. 2003). Criminalisation of this trade may even lead to an increase in rewards, as species become *more* valuable (e.g. Schneider 2008; Willock et al. 2004).

Controlling offences involving international or cross-border crimes is yet more complex. Again, problems of combating international crime are beyond the scope of this paper, but Garstecki (2006) particularly points out problems arising from different legislation, search, seizure and confiscation powers, and maximum sentences across countries dealing with offences of illicit trade in endangered species (see also Schmidt 2004, in relation to illicit waste trade). It is also problematic for investigators pursuing offenders who operate across international borders.

It is finally worth noting that this paper has discussed the problems of enforcement in relation to England and Wales. Much of the literature focuses on range states with denser concentrations of endangered species and areas of rich, but threatened, biodiversity. Many of these fall within developing countries, for which the problems of enforcement are more acute, particularly in relation to resourcing, training, collaborative working/data sharing, corruption and public awareness/support (Akella and Cannon 2004; Schmidt 2004).

### Responding to the Problems of Enforcement

Weak and/or ineffective enforcement needs to be addressed in order to have a more significant impact on the reduction of wildlife crime and the harms associated with it. Such



responses can be categorised as either (1) improving enforcement or (2) alternative forms of control. Whilst the former is important, the author argues that, in light of the problems discussed above, it is now time to focus on alternative approaches to reducing wildlife (and environmental) crime. First, however, methods of improvement will be briefly considered.

### 1. Improving enforcement

The literature contains a number of proposals for how to strengthen enforcement of wildlife and environmental legislation. Predominantly, these involve reducing or removing the problems discussed above: that is to say providing more resources; efforts to improve reporting, recording and data and intelligence gathering; dealing with corruption; increasing the seriousness with which wildlife crimes are viewed; and improving the deterrent effects of sentencing through greater certainty of conviction and/or more severe punishments. As Akella and Cannon (2004) point out, however, simply increasing funding and technology for enforcement agencies will not suffice if capacity building, training, corruption and marginalisation are not also addressed. In other words a holistic solution must be applied (Akella and Cannon 2004).

More specific suggestions in relation to EU enforcement of CITES-related legislation are made by Garstecki (2006) and include communicating the seriousness of illegal wildlife trade, highlighting the organised nature of such offending (this is seen to 'sell' the problem to policy makers and international organisations, such as Interpol), establishing specialist environmental prosecution offices, relating penalties to market and conservation value, allowing seizure of goods and animals even when acquired innocently, trade license revocations and reducing sentencing discretion. Some of these suggestions could, however, exacerbate the situation, as they do not support good working relationships between traders and supervisory authorities (du Rées 2001), they do not encourage co-operation and reporting from innocent purchasers, and reducing sentencing discretion may alienate the judiciary.

The international and possibly organised nature of the trade in endangered species has clearly garnered more attention than other forms of wildlife crime, so many suggestions, like those made by Garstecki (2006), focus on this type of offending. International strategic co-operation (Engler and Parry-Jones 2007), alongside capacity building (Akella and Cannon, 2004) and working closely with international facilitative bodies are therefore also high on the agenda. Interpol has an environmental crime programme, which focuses on wildlife and pollution crimes and aims to assist effective enforcement (Interpol 2010). They recently held their 7th International Environmental Crime Conference and key enforcement improvements centred heavily on capacity building and collaborative working, although the extent to which these activities were being put into practice remains questionable.

A final example of how to improve enforcement provides a quite different suggestion to the other solutions presented. Schneider (2008) has advocated the use of a market reduction approach (MRA) for tackling illicit trade in endangered species. The MRA, first introduced into UK crime reduction strategies by Sutton (1998), recognises the importance of markets in maintaining acquisitive crime levels; in other words that property crimes are demand driven. By disrupting these markets, for example by making it riskier for offenders to sell the proceeds of crime, offending becomes less profitable, thus less attractive. Enforcement remains the central approach (albeit situational crime prevention measures, described below, can also be employed as part of the MRA) but the focus shifts from targeting specific offenders, to targeting disposal markets, including handlers and consumers. Such an approach therefore also

requires systematic and detailed analysis of markets and stolen property (Schneider 2008); in the current example, endangered species. Not only, then, does the MRA provide an alternative focus for enforcement agencies, but it also supports calls for improved data collection – including qualitative interviews with offenders, data sharing and analysis, which would provide a much more detailed picture of the specific species being targeted, how they are obtained and traded and the routes used for transportation, on a species-by-species or area-by-area basis. This increased knowledge would support more targeted enforcement, may reduce the dark figure of wildlife crime and could be used to improve public and policy makers’ awareness of the extent and seriousness of such offences (Akella and Cannon 2004). However, it may be unreasonable to assume that the data needed to support this approach are obtainable. Indeed, Schneider (2008: 26) acknowledges that “...the process of applying the [MRA] crime reduction strategy will most likely be a lengthy, and perhaps, complicated one, as it is with traditional stolen goods markets”. It would also require focused, collaborative efforts and expert analysis, thus there may be significant resource implications. It is perhaps therefore most realistic to see the adoption of such an approach as a complementary, long-term strategy that can be introduced and tested against a highly specific problem, which has already received a critical amount of attention and enforcement activity. For such a case, relatively good data are likely to already exist, relevant agencies may already have collaborated, there is a greater chance of identifying offenders who can be interviewed (Schneider 2008) and if the focus is on an iconic species such as the tiger,<sup>4</sup> resources are more likely to be available.

In relation to improving enforcement it must finally be noted that even if more offenders are brought before the courts, the rewards of offending often far outweigh the punishments received. But as criminological research has shown, even with extremely draconian punishments (including the death penalty), deterrent effects are rarely evident (e.g. Chan and Oxley 2004). Thus, we must also consider alternative methods of reducing wildlife crime.

## 2. Alternative forms of control

Alternative forms of control can work alongside stronger enforcement or, preferably, as first choice approaches, with enforcement through prosecution being the final measure taken (Fortney 2003; Wellsmith 2010). In relation to wildlife crime, the two key alternatives are: offering viable non-crime alternatives and applying crime prevention techniques (Akella and Cannon 2004).

Conservation research suggests that much wildlife crime is committed as a normal response to local conditions. This is particularly the case in developing countries, where first level crimes (that is killing, trapping, persecuting and poaching animals) are often committed by subsistence offenders; animals are seen as either food sources or as threats (e.g. to crops) (Bulte and Rondeau 2007; Engler and Parry-Jones 2007; McMullan and Perrier 2002; Rao et al. 2002). In England and Wales, wildlife crime legislation even allows for harming or destruction of animals in defence of agricultural property. Alternatively, offenders may be part of a larger trade or ‘entertainment’ network to which animals are supplied, in which case they remain incentivised by the material gain resulting from their offending (McMullan and Perrier 2002).

<sup>4</sup> See, for example, discussions regarding the recently held St Petersburg Tiger Summit and the Global Tiger Initiative, which includes partner organisations such as the World Bank, the Smithsonian Institute and Save the Tiger Fund ([www.globaltigerinitiative.org](http://www.globaltigerinitiative.org))

One method of reducing wildlife crime, therefore, would be to make legal activities the default beneficial position (Brack 2002; Engler and Parry-Jones 2007). In other words, potential offenders need to perceive *not* offending as more rewarding than offending. This may be through the provision of alternative subsistence schemes or employing members of the local community, including known poachers, as rangers. Animals need to be more valuable to the community alive and protected in their natural habitats, than they are captured or killed. Sustainable tourism schemes, again supported by and employing members of the local community are a further example of this approach as are other sustainable uses of wildlife, including legal trading (Engler and Parry-Jones 2007). Where criminalised behaviour relates to supposedly sporting or entertainment purposes, alternative non-harmful or non-animal activities may need to be offered, for example drag hunting. However, these will likely require support and investment from influential participants as well as the general public.

Raising public awareness of the negative impact of wildlife crime, and its true extent, will underpin many of the responses discussed. This is already a key aim for many charities involved in animal protection and conservation, and collaborative efforts between these organisations and enforcement agencies should continue to be encouraged and, where possible, financially supported. Such charities and non-governmental organisations (NGOs) are in a much better position to implement incentivisation schemes for sustainable, non-criminal activities than are enforcement agencies (White 2003). Co-operative networks, such as PAW, will be paramount in co-ordinating such complimentary activities and sharing necessary data for their implementation and evaluation, both at a national and international level (Schmidt 2004).

Providing sustainable, acceptable alternatives to wildlife crime will not be possible for all types of offence, nor will they discourage all offenders, but before turning to enforcement action, preventative measures should be considered. As has been argued elsewhere, whilst prevention of crime is always preferable to reduction through conviction, in other words waiting to act until after harm has been caused, this is particularly the case when the harm being perpetrated may result in the loss of native species, or even their extinction (Wellsmith 2010). With the idea of the precautionary principle (White 2008) already embedded in conservation and environmental crime, there should be scope for extending crime prevention efforts in relation to wildlife crime (Wellsmith 2010). The NWCU and other organisations do seem to recognise the importance of prevention either over, or alongside, enforcement approaches (NWCU 2010; Scottish Government 2008), but examples of preventative work in this field are hard to come by.

Over the last two decades, policing in the UK has seen a move away from reactive patrol towards problem-oriented policing (Goldstein 1990), the introduction of the National Intelligence business model and crime problem analysis. This has resulted in a changing emphasis back to the original purpose for which the police were instituted in 1829: prevention, and it is situational crime prevention that has dominated (see, e.g., Tilley 2002).

Situational crime prevention seeks to manipulate the immediate environment in which offending opportunities are presented, to either prevent the ingredients of crime coming together in time and space (a motivated offender and a suitable target, in the absence of capable guardians, handlers or place managers) (Cohen and Felson 1979; Felson 1995) or to tip the rational offender (Cornish and Clarke 1986) towards a non-crime decision through increasing the perceived risks or effort of offending,

decreasing the perceived benefits of offending, removing the excuses for offending and/or reducing any perceived provocations (Cornish and Clarke 2003). A more thorough consideration of this approach, or how it could be applied to the problem of wildlife crime, is beyond the scope of this paper, but is presented elsewhere in relation to the illicit trade in endangered species (Wellsmith 2010; Wellsmith in progress) as well being considered by a number of other researchers (e.g. Clarke 2009; Lemieux and Clarke 2009; Mailley 2008; Mailley and Clarke 2008; Pires and Clarke 2010; Wellsmith 2008). This approach is included here as the author believes crime prevention needs to be embraced, not just as an alternative when enforcement is weak, but as the primary weapon in the arsenal of those tasked with reducing wildlife crime.

Anecdotal evidence (including conversations with PWCOs) and the NWCU (2010) report would appear to suggest that some organisations are keen to embrace alternatives to enforcement, including prevention approaches. However, evidence of such activity is limited. The author can find no published evaluations of situational prevention of wildlife crime. There are only limited reports of such interventions, most notably Guy (2008), an entrant for the UK Tilley Awards. This initiative took a problem-oriented approach to illegal bird trapping in Cyprus and included a detailed analysis of the nature and extent of the problem using the SARA (Scanning, Analysis, Response, Assessment) approach. Responses were based on education, partnership working, intelligence gathering and covert operations, and situational prevention methods, including:

- Increasing risks: anti-trapping operations and high-visibility policing at hot spots; raids on restaurants serving illegal birds (which are mainly poached as foodstuffs); vehicle check points
- Increasing efforts: clearing of trees used to support mist netting in the range area
- Removing excuses: displaying warning signs (including potential punishments); leafletting; effective media use promoting enforcement achievements
- Other: prioritising criminal proceedings related to bird trapping.

Evaluation showed a decline in bird trapping, with an estimated 35 million birds saved across Cyprus. Much of this was through reductions in mist netting, but the evaluation as presented does not make it possible to link this reduction to any of the specified activities.

Other examples of situational prevention measures that could be used to tackle wildlife crime are limited to theoretical discussions, as exemplified by Wellsmith (2010: Table 1). Why examples of these are rarely represented in the literature is unclear. It may be that a wide range of prevention programmes are in place, but do not garner media attention in the way that court cases and punishing 'bad guys' do. It may be, as the author suspects, that prevention schemes are being utilised, but in isolation and with little evaluation or knowledge transfer. Alternatively, under-resourcing, a lack of training and expertise, and significant time constraints may all be combining to limit the ability of enthusiastic individuals and agencies to engage in more problem-oriented methods of crime reduction. Without further research, particularly in England and Wales (some research assessing the practices and capabilities in Scotland has already been carried out), it is difficult to know how to encourage and facilitate the use of alternatives. For that reason the author suggests that an assessment be carried out of the working practices of wildlife crime enforcement personnel, particularly PWCOs, in England and Wales.

## Conclusions and Further Work

This paper has considered the role of enforcement in reducing wildlife crime, raising a number of weaknesses inherent in this approach as well as problems faced when it is put into practice. Even defining wildlife crime and legislating to protect certain species from certain harms (as opposed to all species from all harms) is in itself problematic, albeit beyond the scope of this paper. In relation to those activities that have been criminalised, even successful examples of increasing convictions, focused enforcement and organisations such as the NWCU and PAW cannot detract from the fact that enforcement, and particularly the deterrent effect sought from convicting offenders, remains weak. Key issues include the under-resourcing and marginalisation of this work, the very large dark figure of wildlife crime, the possibility of corruption or neutralisation amongst officials, the lack of seriousness with which such offending is apparently viewed in comparison to more traditional crimes and, ultimately, the lack of deterrence exerted. These make wildlife crime a low risk offence that can, in many cases, produce substantial rewards (McMullan and Perrier 2002). Accordingly, improvements in enforcement, such as adopting a MRA and capacity building, are necessary. However, even strong enforcement may not result in significant reductions in wildlife crime and for this reason the author has advocated taking an alternative approach, focusing on opportunity reduction through measures such as situational crime prevention.

In order to take this approach further, a number of recommendations are made. Firstly, it is argued that efforts to establish the true extent and nature of wildlife crime must be prioritised. This should make use of self-report studies, qualitative interviews with offenders and quasi-victimisation studies, where the general public are surveyed as to their knowledge and experience of particular activities (e.g. awareness of illegal poaching or hunts, ownership of banned specimens and so forth). As well as establishing a baseline of offending, the more detailed information gathered from interviews would then form the basis of problem-oriented analyses that could feed into both MRA and situational crime prevention programmes.

Secondly, an assessment of working practices of wildlife crime enforcers in England and Wales should be carried out. This would allow for a more detailed understanding of the barriers to effective enforcement, as well as establishing the feasibility of applying alternative approaches. It is anticipated that such research would also uncover many examples of good practice in both enforcement and prevention that are not widely known.

Thirdly, a wildlife crime toolkit should be produced, along the lines of those already available for many other forms of crime.<sup>5</sup> This would be informed by the findings of the research recommended above, as well as the use of existing criminological expertise, and act as a repository for knowledge and good practice in the field of wildlife crime.

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<sup>5</sup> See <http://webarchive.nationalarchives.gov.uk/20100413151441/http://crimereduction.homeoffice.gov.uk/toolkits/index.htm>

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