

Bird of Prey Persecution and Poisoning Report Northern Ireland 2009 - 2013



PARTNERSHIP FOR ACTION AGAINST
wildlife crime
Northern Ireland



A report prepared by the Raptor Subgroup of the Partnership
for Action against Wildlife Crime Northern Ireland (PAW NI)
covering the period January 2009 to December 2013

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SUMMARY

Raptor persecution is one of the six UK wildlife crime priorities, set in 2013 by the National Wildlife Crime Unit (NWCU) UK Wildlife Crime Tasking and Co-ordination Group, which have been assessed as posing the greatest current threat to the conservation status of species^a. The PAW NI Raptor Subgroup supports the implementation plans for the monitoring, awareness and prevention of raptor persecution in Northern Ireland.

This is the first report of the persecution and poisoning of raptors in Northern Ireland and covers the period 2009 – 2013 inclusive. It is intended that future reports will be published annually, with reference to temporal and spatial changes in both annual and five-year trends.

Since 2009 a total of 30 illegal persecution incidents, involving seven species of birds of prey have been confirmed in Northern Ireland. These 30 incidents include the confirmed shooting, poisoning or trapping of 33 individual birds of prey as well as one incident of nest destruction. The most frequently recorded species involved were buzzard (56%), red kite (21%) and peregrine falcon (12%). There was evidence of secondary rodenticide poisoning in eight incidents, involving nine individuals of four species, but in none of these incidents was secondary poisoning determined as the cause of death.

An additional 10 confirmed incidents were collated separately based on the discovery of poisoned baits and/or other poisoned wildlife found in circumstances that could theoretically have resulted in raptor persecution had they not been discovered and removed. There were a further four probable incidents collated involving six individual raptors.

This report makes recommendations on reporting and recording of raptor injury and mortality incidents and increasing public awareness and education, to help combat illegal bird of prey persecution and poisoning in Northern Ireland through a partnership approach.

^aNWCU Strategic Assessment 2013 [<http://www.nwcu.police.uk/wp-content/uploads/2014/04/NWCU-Strategic-Assessment-2013-final-v2.pdf>]

INTRODUCTION

The Partnership for Action against Wildlife Crime (PAW) is a body comprising representatives of the government agencies and non-government-organisations involved in wildlife crime detection and wildlife law enforcement in the UK.

The PAW Northern Ireland Raptor Subgroup (hereafter PAWNI RS) consists of representatives from organisations directly involved in the monitoring of, collection of data on, and enforcement of wildlife crimes against birds of prey in Northern Ireland. These currently include; Police Service of Northern Ireland (PSNI), Northern Ireland Environment Agency (NIEA), Northern Ireland Raptor Study Group (NIRSG), Royal Society for the Protection of Birds (RSPB) and National Wildlife Crime Unit (NWCU).

Bird of prey populations in Northern Ireland are making a recovery from previous centuries of persecution, land use changes and exposure to environmental contaminants. Some species are doing well whilst others remain vulnerable for a variety of reasons, but all species remain susceptible to population declines, and potential extirpation, due to persecution and poisoning.

It was agreed by the PAWNI RS that data should be collated and published specifically for Northern Ireland in order to inform on patterns, distribution and seasonality of raptor persecution and to assist enforcement.

The aim of this report is therefore to increase awareness and understanding of the occurrence and distribution of crimes against birds of prey and to increase monitoring and reporting of such incidents. The collation of a database from all available information allows the mapping of incidents to enable spatial analysis of information on incidents to identify potential 'hot spots' for strategic planning for enforcement agencies. This report also allows for the identification of the use and impact of poisons on birds of prey and other wildlife in Northern Ireland. This report is seen as a further tool in the monitoring, investigation and enforcement of wildlife crime in Northern Ireland.

The main aims of this report are to;

- Improve the status of the UK wildlife crime priority of raptor persecution (including poisoning, trapping, egg theft, nest disturbance)

- Collate records and maintain a database of incidents of persecution involving birds of prey and owls (raptors) in Northern Ireland
- Collate ancillary records and maintain a database of incidents of raptor risk incidents e.g. poisoned baits only or illegal traps and other wildlife persecution incidents
- Collate spatial information to identify areas of recurrent raptor persecution
- Centrally collate evidence from all sources to support statutory authorities in tackling raptor persecution
- Monitor the prevalence of poisoning in raptor populations, including secondary poisoning by rodenticides
- Monitor the prevalence of other types of persecution, e.g. shooting or trapping, in raptor populations
- Identify persecution hot spots to assist with enforcement and strategic planning and/or operations
- Increase public awareness of offences of raptor persecution and encourage vigilance and reporting of suspected crimes, ultimately to help combat wildlife crime against birds of prey

The Law: Detection and investigation of raptor crime in Northern Ireland

Crimes against birds of prey include, but are not limited to, poisoning, trapping and shooting. The setting of poison baits in the open is illegal because it is indiscriminate and has the potential to kill many birds of prey as well as other wildlife, pets and livestock and/or people. Poisons used may include banned substances or legal substances which are used illegally.

The preparation, review and publication of wildlife legislation is the responsibility of the Northern Ireland Environment Agency (NIEA), an agency within the Department of Environment (DoE). Relevant legislation currently includes the Wildlife (Northern Ireland) Order 1985, as amended by the Wildlife (Amendment) (Northern Ireland) Order 1995, and the Wildlife and Natural Environment (Northern Ireland) Act 2011 (WANE Act). NIEA provides advice on wildlife legislation, and if required, works in conjunction with the PSNI to investigate instances of bird poisoning, in accordance with the wildlife order.

Under the Wildlife (Northern Ireland) Order 1985 and the WANE Act it is against the law to intentionally or recklessly:

- Kill, injure or take any wild bird
- Take or destroy wild bird eggs
- Take, damage or destroy a nest of a wild bird whilst it is in use or being built
- Disturb a wild bird when it is building a nest or is in, on or near a nest containing eggs or young or disturb dependent young
- Obstruct or prevent any wild bird from using its nest or roost site
- Take, damage or destroy a nest of a golden eagle, white-tailed eagle, osprey, barn owl, peregrine or red kite at any time of the year

It is also illegal to set in position any trap or any poisonous, poisoned or stupefying substance or muscle-relaxing agent, which would cause bodily injury or death to any wild bird which may come into contact with the trap or substance. Further, should any landowner, occupier or manager permit or suffer any other person to commit these offenses on his land, they will be guilty of an offence.^b

The Department of Agriculture & Rural Development (DARD) (Animal Identification & Legislation Welfare Branch) is responsible for the Welfare of Animals Act (NI) 2011. In this act it is stated that a person commits an offence if, without lawful authority or reasonable excuse, that person knowingly administers, or allows to be taken, any poisonous or injurious drug or substance to a protected animal.^c

These acts of persecution may be subject to custodial sentences of up to six months and fines (up to £5,000 per offence) if carried out against any bird of prey in Northern Ireland.

There are also a number of pieces of legislation which regulate the use of pesticides in Northern Ireland. The government runs a Wildlife Incident Investigation Scheme (WIIS)^d which investigates the death or illness of wildlife, companion animals and beneficial insects that may have resulted from pesticide poisoning.

^b Wildlife (NI) Order 1985 (as amended), Section 6

^c Welfare of Animals Act (NI) 2011, Section 7.

^d <http://www.pesticides.gov.uk/guidance/industries/pesticides/topics/reducing-environmental-impact/wildlife>

Four categories are used to classify the type of incident involving pesticides, these are:

- **Approved use** – the pesticide product has been used according to the conditions of its approval
- **Misuse** – the pesticide product has not been used according to the conditions of its authorisation, but often just carelessly or accidentally, without the intention of harming animals
- **Abuse** – a pesticide has been deliberately used in an illegal manner to poison, or to try to poison animals. (This includes the use of banned substances)
- **Unspecified use** – the source of the pesticide is uncertain, or the incident could not be classed as being in one of the other categories

In relation to pesticides only cases of **abuse** are documented in this report.

This Report

This baseline report only includes records of persecution and poisoning incidents against birds of prey reported between 2009 and 2013. This allows for comparisons of five year trends with equivalent reports in Britain^e. This report will then be followed by a published annual review of such incidents thereafter, presenting both annual statistics and those covering each five year period.

The data is collated from a number of sources. This includes:

- Incidents reported to PSNI
- Incidents published through WIIS
- Incidents recorded or reported by the RSPB and NIRSG.

In this database and report proven or suspected crimes are detailed on an ‘incident’ basis. Each incident may then contain various offence types, victims, poisons etc. Each collated incident is then assigned a status according to the certainty with which it can be defined as having taken place. This definition is either ‘confirmed’, ‘probable’ or ‘possible’. The definition of a distinct incident and categories of offence type used here

^e <http://www.scotland.gov.uk/Topics/Environment/Wildlife-Habitats/paw-scotland/types-of-crime/crimes-against-birds/Poisoninghotspotmaps/2009-2013>

are the same as those used by RSPB "Species Protection Database" for reporting and analysis;

Incident An incident may involve more than one bird or species or victim, and is defined as an offence or an alleged offence that has occurred at a distinct place and time. Incidents are separated on the basis that any bait, victim, group or baits, victims etc. that are: found on a different date; found sufficiently far apart to be represented by a different six-figure grid reference; found at the same grid reference and on the same date but in circumstances that otherwise separate them (for example a poison victim that is very decomposed beside a fresh bait - so the bait could not have been responsible for the death of the victim); are classified as separate incidents.

Confirmed The circumstances indicate an illegal act has taken place. These incidents are typically substantiated by evidence such as post mortem or toxicological analysis (e.g. shooting and poisoning cases) or reliable eye-witness evidence. Strength of evidence rules out other lawful explanations that may also fit the known facts.

Probable The circumstances indicate that by far the most likely explanation is that an illegal act has taken place. Another (lawful) explanation that may also fit the known facts is unlikely but cannot be entirely dismissed.

**Possible/
Unconfirmed** The circumstances indicate an illegal act has possibly taken place. However another explanation would also fit the known facts and cannot be ruled out, e.g. the bird may have succumbed to secondary poisoning from legally used rodenticides.

This report focusses on incidents which have been defined as '**confirmed**' whilst cases of probable incidents, i.e. suspected crimes, are summarised in this report but are not included in the hot spot maps due to the lack of definitive proof that a crime has been committed. There were additional possible/unconfirmed reports of raptor persecution. These incidents are collated for intelligence but have not been mapped or presented further in this report.



Figure 1. Carcasses of a buzzard, red kite and fox found in proximity to a rabbit bait in Co. Down in April 2013. The buzzard and red kite are of different stages of decomposition, thus this constitutes two separate persecution incidents. (Image: RSPB).

RESULTS

Since 2007 PAWNI have developed and encouraged a clear reporting strategy for incidents to be reported to PSNI to facilitate a public report. This has been further encouraged by the PAWNI RS with publication of a raptor crime leaflet in 2014 (Fig. 4) to help standardise reporting. However, it is still likely that the figures presented here represent only a fraction of the number of incidents within each category, as many incidents may remain undetected and unreported, particularly crimes that occur in remote areas.

Between January 2009 and December 2013 there have been 30 incidents of confirmed crimes against raptors collated in Northern Ireland involving 34 individual birds of prey (Table 1). Confirmed incidents were most frequently recorded involving buzzards (56%), red kites (21%) and peregrine falcons (12%), with remaining crimes against golden eagles (3%), white-tailed eagle (3%), sparrowhawk (3%) and merlin (3%).

Crimes most frequently involved poisoning (80%), shooting (17%), trapping (3%) and nest destruction (3%) (Map1). There were 24 poisoning incidents involving the abuse of pesticides and rodenticides, 14 of which involved Carbofuran, eight which involved Alphachloralose and two involved Aldicarb.

In three of these incidents carcasses showed detectable levels of rodenticides (Bromadiolone, Brodifacoum, Difenacoum, and/or Flocoumafen; but other chemicals were deemed to be the cause of death. There were rodenticides identified in six further raptors but not at levels deemed to be the cause of death (Table 5).

Incidents were confirmed in Counties Down (37%), Armagh (27%), Antrim (23%), Londonderry (10%) and Tyrone (3%) (Map2). Hot spot areas, areas where confirmed incidents of raptor crime are most frequently detected, occur in counties Down and Armagh, both in PSNI jurisdiction 'E', and include the area surrounding Jerrettspass and Poyntzpass and the area surrounding Rathfriland. Persecution incidents against birds of prey were most frequently detected in April and October (Fig. 2).

There were 10 other incidents where pesticide abuse resulted in the confirmed persecution of protected corvids, other wildlife, or the discovery of poisoned baits, which could theoretically have resulted in raptor persecution had they not been discovered and removed (Table 3). These incidents indicate a wider risk to raptors, humans, livestock and pets in the environment and have been included in the hot spot map (Map2).

There were four incidents of probable raptor persecution (Table 4). The first relates to a white-tailed eagle in October 2009 when a satellite-tag was removed from a carcass by a member of the public and which had shot marks on the aerial and was supplied to the PSNI but unfortunately the eagle carcass was never recovered.

Secondly, three dead buzzards were found with a magpie and baited rabbit in August 2011 (Incident 6 in Table 3) and a photo of the initial scene was taken by the member of public reporting the incident (Fig. 3). However, when PSNI officers arrived to the scene the buzzards and bait had been removed. The magpie tested positive for Alphachloralose poisoning.

In October that same year a buzzard died from an infection from a wound reported by the investigating vet to have been caused by a gunshot, however there was no x-ray or post-mortem to confirm this diagnosis.

Finally, in February 2013 a buzzard was found alive in a cage trap but in very poor condition suggesting that it had been present in the trap for several days. These incidents have not been mapped.

Table 1. All confirmed incidents of persecution and poisoning of birds of prey recorded in Northern Ireland between 2009 and 2013.

	Bait	Species	County	10km sq.	Year	Month	Cause of Death	Toxin / Rodenticide detected
1		Buzzard	Down	J22	2009	May	Abuse	Carbofuran
2		Buzzard	Antrim	J49	2009	Jul	Abuse	Carbofuran
3	Rabbit	Red Kite	Armagh	J03	2009	Oct	Abuse	Alphachloralose
4		Buzzard	Armagh	J03	2009	Oct	Abuse	Alphachloralose
5	Sausages	Buzzard	Armagh	H94	2010	Apr	Abuse	Carbofuran
6		Buzzard	Armagh	H94	2010	Apr	Abuse	Carbofuran
7		Buzzard x 2	Antrim	J39	2010	Apr	Abuse	Carbofuran
8		Peregrine falcon x 2	Londonderry	C50	2010	Jul	Abuse	Alphachloralose, Carbofuran
9	Rabbit x 2	Buzzard	Armagh	J03	2010	Sep	Abuse	Alphachloralose
10		Peregrine falcon	Down	J65	2010	Oct	Shot	
11		Golden Eagle, Raven	Tyrone	H17	2010	Nov	Abuse	Carbofuran
12		Buzzard	Antrim	D30	2011	Mar	Abuse	Carbofuran
13		Red kite	Down	J34	2011	Apr	Abuse	Carbofuran
14	Rabbit	Buzzard x 2	Armagh	J04	2011	May	Abuse	Alphachloralose
15		Buzzard	Down	J03	2012	May	Trapped	
16		Sparrowhawk	Londonderry	C83	2012	Jun	Nest destruction	
17		Peregrine falcon	Antrim	D20	2012	Jul	Shot	
18		Buzzard	Armagh	J03	2012	Sep	Abuse	Alphachloralose
19		Buzzard	Londonderry	H99	2013	Mar	Abuse	Carbofuran, Bromadiolone, Brodifacoum
20	Rabbit	Red Kite	Down	J23	2013	Apr	Abuse	Aldicarb, Bromadiolone, Difenacoum, Brodifacoum
21		Buzzard	Down	J23	2013	Apr	Abuse	Aldicarb, Bromadiolone, Flocoumafen
22		Buzzard	Antrim	D22	2013	Apr	Shot	
23		White-tailed eagle	Antrim	D12	2013	Apr	Abuse	Carbofuran
24		Red Kite	Down	J33	2013	Jun	Abuse	Alphachloralose
25		Red Kite	Down	J33	2013	Aug	Abuse	Alphachloralose
26		Red Kite	Antrim	D30	2013	Aug	Abuse	Carbofuran
27		Buzzard	Armagh	J03	2013	Sep	Shot	
28		Buzzard x 2, rook x1	Down	J23	2013	Oct	Abuse	Carbofuran
29		Red Kite	Down	J34	2013	Nov	Abuse	Carbofuran
30		Merlin	Down	J44	2013	Dec	Shot	

Figure 2. Confirmed raptor persecution and poisoning by month

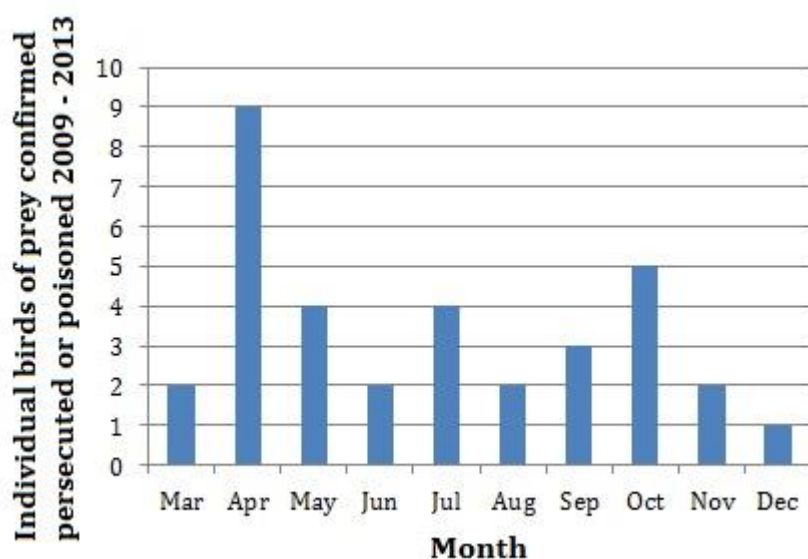


Table 2. All confirmed bird of prey victims of persecution and poisoning recorded in Northern Ireland between 2009 and 2013 and incidents where other poisoned animals, or baits, were recovered in circumstances that could theoretically have resulted in raptor persecution had they not been discovered and removed. NB. Figures relate to the total number of animals found.

	Buzzard	Red Kite	Peregrine falcon	Golden Eagle	Merlin	Sparrowhawk	White-tailed Eagle	Sub Total	Raven	Other animal	Bait	Total
2009	3	1						4	1	5	1	11
2010	5		3	1				9	1	1	1	12
2011	3	1						4		2	2	8
2012	2		1			1		4	1	1		6
2013	6	5			1		1	13		2		15
Total	19	7	4	1	1	1	1	34	3	11	4	52

Table 3. Pesticide abuse incidents in which other wildlife was killed or indiscriminate baits were recovered in circumstances that could theoretically have resulted in raptor persecution had they not been discovered and removed.

	Bait	Species	County	10km square	Year	Month	Cause of Death	Toxins / Rodenticides detected
1		Blackbird, Magpie, Mouse ^f	Armagh	H84	2009	Jan	Abuse	Alphachloralose
2		Raven	Down	J44	2009	Apr	Abuse	Alphachloralose
3	Rabbit		Tyrone	H85	2009	Jun	Abuse	Alphachloralose
4	Pigeon		Antrim	D02	2010	Mar	Abuse	Carbofuran
5	Pigeon		Tyrone	H37	2011	Apr	Abuse	Carbofuran
6		Magpie ^g	Armagh	J03	2011	Aug	Abuse	Alphachloralose
7	Rabbit		Antrim	D22	2011	Oct	Abuse	Alphachloralose
8		Fox	Antrim	D00	2011	Dec	Abuse	Carbofuran
9		Raven	Antrim	D13	2012	Jan	Abuse ^h	Carbofuran
10		Fox	Down	J43	2013	Feb	Abuse	Carbofuran

Table 4. Probable incidents of raptor persecution

	Species	County	Year	Month	Probable Cause of Death
1	White-tailed eagle	Antrim	2009	Oct	Shot
2	Buzzard x 3	Armagh	2011	Aug	Abuse - Alphachloralose
3	Buzzard	Armagh	2011	Oct	Shot
4	Buzzard	Armagh	2013	Feb	Trapped

^f A domestic dog was also found in this incident confirmed as Alphachloralose abuse

^g Initially found with three buzzards and a rabbit (No. 2 in Table 4; Figure 3)

^h Status of pesticide use not assigned by WIIS, but all Carbofuran incidents are classified as 'Abuse' in this report since this pesticide has been banned in Europe since 2001.



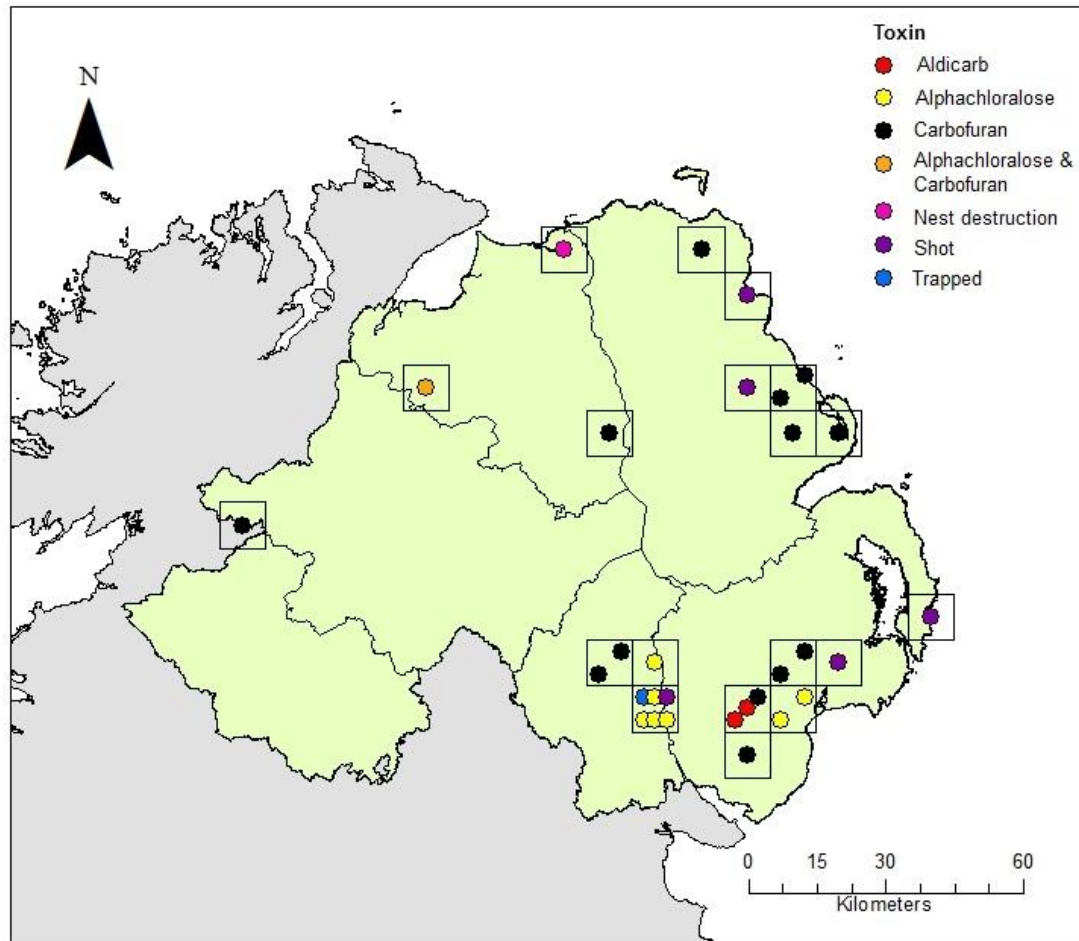
Figure 3. Three recently fledged buzzard lying next to baited rabbit in Co. Armagh. The buzzards were not tested, and thus do not appear in Table 1, as they were removed before PSNI attendance at the scene. They are therefore included as a 'Probable' incident in Table 4, number 2. (NB. Magpie which tested positive for Alphachloralose is not visible in this photo – see Table 3, number 6.) (Image: Anon)

Table 5. Carcasses tested showing evidence of secondary poisoning by rodenticides. NB. In these cases ingestion of rodenticide was not deemed to be cause of death, and rodenticides could not be confirmed as being used in an illegal manner.

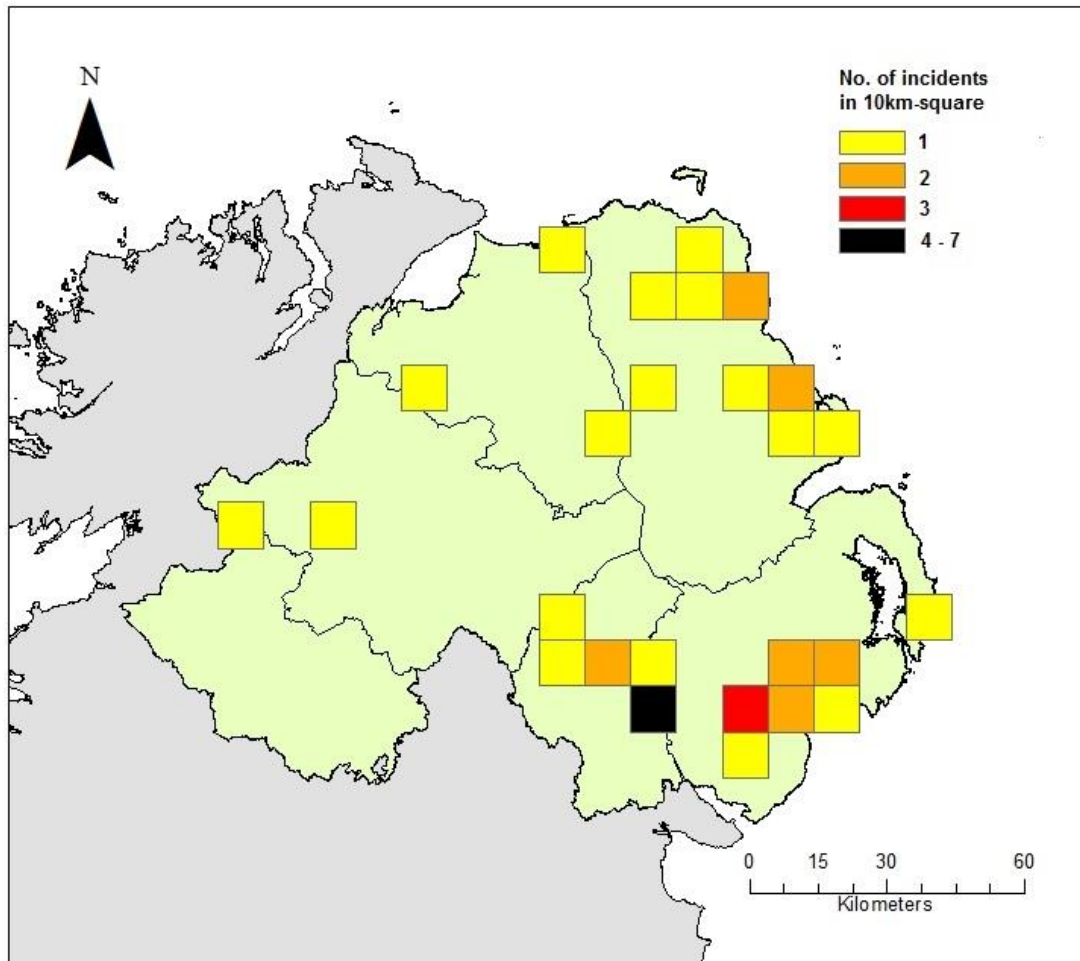
Bait	Species	County	Year	Month	Cause of Death	Toxins / Rodenticides detected
	Buzzard		2010	Mar	Unknown	Brodifacoum
	Buzzard x 2	Antrim	2010	Apr	Unknown	Bromadiolone
	Buzzard*	Londonderry	2013	Mar	Abuse	Carbofuran, Bromadiolone, Brodifacoum
Rabbit	Red Kite*	Down	2013	Apr	Abuse	Aldicarb, Bromadiolone, Difenacoum, Brodifacoum
	Buzzard*	Down	2013	Apr	Abuse	Aldicarb, Bromadiolone, Flocoumafen
	Barn Owl	Down	2013	May	Unknown	Difenacoum, Flocoumafen
	Buzzard	Armagh	2013	May	Unknown	Brodifacoum, Bromadiolone, Difenacoum, Flocoumafen
	Peregrine falcon	Tyrone	2013	Sep	Unknown	Brodifacoum

* In these cases the cause of death was confirmed as abuse of other pesticides and as such these incidents are also included in Table 1

Map 1. Confirmed incidents of persecution of birds of prey reported in Northern Ireland in the period Jan 2009 – Dec 2013 (Table 1) defined by incident type. The map shows incidents on a 10km scale. Please note that the number of incidents does not indicate the number of birds killed. Please also note that symbols within squares simply represent an incident in that square, not the location within that square that the incident has taken place.



Map 2. Confirmed incidents of persecution of birds of prey (Table 1) and poisoned baits and other wildlife (Table 3) reported in Northern Ireland in the period Jan 2009 – Dec 2013. The map shows incidents on a 10km scale. Colour coding indicates where more than one incident has occurred in a 10km-square. Please note that the number of incidents does not indicate the number of birds killed.



DISCUSSION

Prior to the development of this database and report any incidents of proven or suspected wildlife crime in Northern Ireland were being collated by several different organisations. The Partnership for Action against Wildlife Crime (PAW) has enabled an agreement between these groups to collate data and there is now a central, standardised database, with data collated from PSNI records, published WIIS results, NIRSG records and RSPB records. This data has enabled the production a robust report which is also comparable to data produced in Britain^j and the Republic of Ireland^k. The system for monitoring and reporting results has therefore been improved and thus the capacity to identify areas of repeated offences increased.

This process has been extremely positive in the associated organisations working together. This has allowed for the reporting of robust data and is a positive step forward. Mapping is useful to help identify hot spots which will facilitate increased intelligence and monitoring by investigative agencies.

GOING FORWARD

In order to minimise the number of potential persecution and poisoning incidents which are not reported to the PSNI or are not tested several actions have been undertaken by the PSNI and the PAWNI RS;

- The PSNI Wildlife Liaison Officer (WLO) will continue to raise awareness of wildlife and welfare issues and is the central point of contact within the Police Service for police and police staff when support and advice is required regarding wildlife crime.
- To raise awareness amongst the wider public and stakeholders and encourage the standardised reporting of suspected incidents of raptor crimes the PAWNI RS recently produced a leaflet detailing how to identify and report suspected wildlife crimes (Fig. 4 and Fig. 5).

ⁱRSPB Birdcrime 2013 http://www.rspb.org.uk/Images/birdcrime_2013_tcm9-384665.pdf

^j Wildlife Crime in Scotland <http://www.scotland.gov.uk/Topics/Environment/Wildlife-Habitats/paw-scotland/news>

^k NPWS Bird of Prey Poisoning and Persecution Report 2011
<http://www.npws.ie/publications/archive/2011%20Bird%20of%20Prey%20Poison%20and%20Persecution%20Report-July2013.pdf>

- The PAWNI RS have produced a detailed protocol for members of organisations who actively engage in the monitoring of raptors or the management of land which raptors occupy, outlining the best practice for reporting of a potential crime to the PSNI and how to ensure that carcasses and/or associated evidence and crime scenes are maintained intact so that the greatest possible amount of evidence can be collected by the PSNI for an investigation.
- It has been agreed by the PAWNI RS members that future incidents will continue to be recorded in a standardised, centralised PAWNI database, currently administered by the NIRSG Raptor Officer.

In order to increase the reporting and recording of raptor injuries and mortality incidents, and to increasing public awareness and education about the issues surrounding crimes against birds of prey, to help combat illegal bird of prey persecution and poisoning in Northern Ireland, the PAWNI RS has agreed the following;

- An annual schedule of press releases and awareness opportunities - based on the frequency occurrence of incidents during April and October it has been decided that these awareness opportunities will be best in the spring and autumn.
- Production of an annual report of raptor persecution in Northern Ireland as well as five year trends.
- To identify, and engage with, other stakeholders or partners to maximise participation in future reporting e.g. HSE, AFBI, Animal Welfare Officers etc.
- To raise the profile of each incident on a case-by-case basis, an important tool in obtaining intelligence information relating to that crime. However it is necessary that once confirmed a crime is to be highlighted in the public domain, that the PSNI/ WLO and/or PSNI Investigation Officer will be consulted beforehand to ensure any ongoing investigation is not compromised.
- To continue to support the Campaign for Responsible Rodenticide Use (www.thinkwildlife.org) in Northern Ireland and the Republic of Ireland to continue to raise awareness of the risks to wildlife from rodenticides and secondary poisoning of raptors.

It is also recommended that PAWNI also liaise with other agencies in Britain and Republic of Ireland (e.g. NPWS) to increase national awareness of crimes against birds of prey where possible, including cross-border initiatives where necessary.

Finally, it is recommended that it will be useful in the future to undertake population modelling of raptors in Northern Ireland to establish the impact of persecution on their respective populations. It will be necessary to collate further historical and future statistics for this further research which is highly desirable.



Figure 4. Launch of the PAW RS wildlife crime leaflet in 2014 at the annual NIRSG conference



Figure 5. Part of the PAW RS Raptor Crime leaflet launched in March 2014.

ACKNOWLEDGEMENTS

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