Bird of Prey Persecution and Poisoning Report Northern Ireland 2018

&

Ten Year Review 2009-2018







A report prepared by the Raptor Subgroup of the Partnership for Action against Wildlife Crime Northern Ireland (PAW NI) Nov 2019

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Report Suspicious Activity

The hot spot maps of confirmed incidents enable PSNI & the PAW NI Raptor Subgroup's efforts to be focused in problem areas - however, this is not a substitute for intelligence gathering through public reports. Any information, whether current or historical, could be extremely important.

PLEASE REPORT ANY SUSPICIONS OF RAPTOR PERSECUTION TO PSNI ON '101'

OR ANONYMOUSLY VIA CRIMESTOPPERS ON 0800 555 111

SUMMARY

Bird of prey ('raptor') persecution remains one of the six UK wildlife crime priorities, having been assessed as posing a threat to the conservation status of several bird of prey species¹. The Partnership for Action against Wildlife Crime Northern Ireland (PAW NI) Raptor Subgroup supports the implementation of plans for the monitoring, awareness and prevention of raptor persecution in Northern Ireland.

This report of the persecution and secondary poisoning of birds of prey in Northern Ireland covers incidents recorded in the period 1st January 2018 to 31st December 2018, with an overview of incidents between 2009 and 2018² (ten-year analysis).

In 2018, there were 22 reports of suspected raptor persecution, or suspected poisons or baits, made to the PSNI. Two cases involved confirmed illegal persecution incidents in Northern Ireland, in which three birds of prey were killed. Confirmed incidents involved the killing of two red kites and one buzzard, all as a result of carbofuran poisoning. An additional two confirmed incidents were collated separately based on the discovery of poisoned baits and/or other poisoned wildlife found in circumstances that, in all likelihood, were targeted at killing birds of prey, or could theoretically have resulted in killing raptors had they not been discovered and removed.

Confirmed incidents were located across four 10-km squares, three of which had no previous records of confirmed incidents since PAW NI reporting began in 2009.

There was evidence of secondary rodenticide poisoning in ten separate incidents in 2018, affecting six buzzards, four red kites, a sparrowhawk and a kestrel; secondary poisoning was not reported as the primary cause of death in any of these incidents.

Between 2009 and 2018 the total number of birds confirmed killed or injured in illegal incidents in Northern Ireland was 66, with an additional two incidents of confirmed nest destruction, in 58 confirmed incidents, recorded in a fifth of all 10km squares in Northern Ireland (20%; n=37). These incidents have involved eight different raptor species, most frequently the common buzzard (49%), red kite (21%) and peregrine falcon (19%). There have been an additional 14 confirmed incidents involving poisoned baits and/or

¹NWCU Strategic Assessment 2018 [https://www.nwcu.police.uk/wpcontent/uploads/2018/09/Strategic-Assessment-UK-Wildlife-Crime-2018-Public-Version.pdf] ² Previous reports can be accessed at https://www.wildlifecrimeni.org/

other poisoned wildlife in circumstances where it is believed birds of prey could have been killed, in 14 x 10km squares. This brings the total confirmed incidents in the 10-year period 2009-2018 to 72 incidents, in 46 separate 10km squares which amounts to a quarter of the squares in Northern Ireland.

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 PAW NI RS) consists of representatives from organisations involved in the monitoring, collection and analysis of data, and enforcement of wildlife crimes against birds of prey ('raptors') 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), National Wildlife Crime Unit (NWCU), Agri-Food and Biosciences Institute (AFBI NI), the Health and Safety Executive for Northern Ireland (HSE NI) and the Department of Agriculture, Environment and Rural Affairs (DAERA) Pesticides Branch.

Bird of prey populations in Northern Ireland, for the most-part, are making a recovery from previous centuries of persecution, land use changes and exposure to environmental contaminants³. 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.

The aim of this report is 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. Further information on the background of this report and the law in relation to Wildlife Crime in Northern Ireland can be found in the first Bird of Prey Persecution and Poisoning Report Northern Ireland 2009-2013 (here).

³Colhoun, K. & Cummins, S. (2013). Birds of Conservation Concern in Ireland 2014-2019. Irish Birds 9: 523-544.

All birds of prey in Northern Ireland are protected by legislation including 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). Under the Wildlife (Northern Ireland) Order 1985 it is against the law to <u>intentionally or recklessly</u>:

- Kill, injure or take any wild bird
- Take or destroy wild bird eggs or 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

Acts of wildlife crime may be subject to custodial sentences of up to six months and/or fines (up to £5,000 per offence) if carried out against any bird of prey in Northern Ireland.

PAW NI Raptor Persecution Report

This report includes the persecution and secondary poisoning incidents involving birds of prey recorded in Northern Ireland between January 2018 and December 2018. This report also undertakes a 10-year review of confirmed incidents (2009 – 2018). Confirmed incidents are classified on a case-by-case basis and each incident may then contain various offence types, victims, poisons etc. Details on the collection and collation of the data, the definition of 'confirmed', 'probable' or 'possible' incidents and the definition of the 'misuse' or 'abuse' of pesticides can be found in the Bird of Prey Persecution and Poisoning Report Northern Ireland 2009-2013 (here).

Cases of probable and possible incidents may be alluded to in the discussion, but neither of these type of incidents are included in the hot spot maps due to the lack of sufficient information to record these as confirmed incidents. These have, however, been collated for intelligence purposes in the databases held by PSNI, NIRSG and RSPB.

RESULTS

Incidents Reported in 2018

A total of 19 incidents, involving 22 deceased birds of prey, and a further three incidents involving suspected poisons or baits, were investigated by PSNI to determine whether offences may have been committed in 2018. Of these 22 incidents there were:

- Four confirmed crimes
- One possible crime

There was an alternative cause of death determined in eight incidents (disease, starvation, road traffic accident/ trauma). In nine of the incidents the cause of death was unknown, with the samples too decomposed for testing in six of these incidents.

Confirmed Incidents

In 2018 there were two confirmed incidents of poisoning of raptors recorded in Northern Ireland, involving two species; red kite (2 birds) and buzzard (1 bird) (Table 1). There was also two confirmed pesticide abuse cases in which other wildlife was killed, or indiscriminate baits were recovered, in circumstances which there was a high likelihood birds of prey were the intended target, or could theoretically have resulted in raptor persecution had they not been discovered and removed (Table 2). These incidents were confirmed in counties Down (2), Armagh (1) and Tyrone (1) (Figure 1).

All of the confirmed incidents of poisoning involved the highly toxic substance carbofuran, banned in the EU since 2001 and for which there is no legal use in the UK (Figure 2).

Three of the four confirmed incidents were found in areas where there were no previous records of raptor persecution in the preceding nine years;

Two red kites were confirmed poisoned with carbofuran, in J14, the Banbridge/ Annaclone area of Co. Down. This was a pair of breeding adults. The male was found alive but sick near a known nest site and subsequently died. Following a search of the local area the female was subsequently found dead on the nest, where she had been incubating three eggs (Image 2). Given the ecology of these birds it is likely that the male may have collected poisoned prey / bait close to the nest site and brought the food to his mate and also consumed some himself.

- Three crows were found poisoned with carbofuran in J58, an area of north Down with no previous records. The finding circumstances of these birds were such that a bird of prey could have consumed the crows, whether this was the intended target or not.
- A partially plucked and eaten racing pigeon (ringed), which had been smeared in carbofuran, was found tethered at a site in H27, the Lough Bradan area, Co. Tyrone (Image 1). This was believed to be a deliberate act to entice the resident peregrines, which only catch and consume live prey. A peregrine chick, prematurely out of the nest, was found dead close by and only one adult was in attendance and the second adult confirmed missing from the site.

In the remaining incident a buzzard was found dead, confirmed poisoned with carbofuran, in H84, in the Loughgall/Castledillon area in October. This area has historical precedence - in 2009 there were four animals (non-raptor) found poisoned with alphachloralose in this 10km square. Also, this near the area in the adjacent 10km square where two buzzards were confirmed poisoned with carbofuran in 2010, and sausages laced in carbofuran were located at this time.

Other Incidents of Note

In a possible incident, a red kite died after consuming a high concentration of diazinon. Diazinon is an organophosphate pesticide and a component in sheep dip (used for preventing and treating tick, mite and fly larva infections in sheep). Diazinon (also called Dimpylate) is approved in the UK as a veterinary medicine in a number of professional and non-professional products. There have been cases of this product being deliberately used to poison birds of prey. In this case it is not known whether the red kite was poisoned due to abuse of the product, or perhaps as a result of scavenging a sheep carcass. Diazinon is highly toxic to birds. As this incident cannot be directly linked to raptor persecution without further information it remains classified as 'possible'.

All of the confirmed incidents in 2018 were birds killed with the highly toxic pesticide, carbofuran. This substance was also recorded in a cat in Co. Down in 2018 (reported to Council Animal Welfare Officers: see <u>WIIS</u>), and has previously been responsible for the

deaths of many cats and dogs across the UK (<u>WIIS</u>), and undoubtedly may be responsible for more deaths of pets and wildlife which may go unreported.

Secondary Poisoning by Rodenticides

Secondary poisoning by rodenticides (Bromadiolone, Brodifacoum, Difenacoum, and/or Flocoumafen) was recorded in 12 birds of prey in 2018, six buzzards, four red kites, a sparrowhawk and a kestrel (Table 3). However, these rodenticides were not deemed to be recorded at combined concentrations (>0.2 mg/kg) considered to have been the cause of death, and were within the levels expected through ingestion of rodenticide poisoned prey.

Second-generation anticoagulant rodenticides (SGARs) can accumulate in non-target scavanging and predatory species and the sublethal effects on breeding success and survival are unknown⁴. Seven of the 12 birds had an undetermined cause of death. SGAR contamination and poisoning of non-target animals is increasing in degree and scale⁴.

There is a code-of-best practice for the safe use of rodenticides, which not only aims to protect non-target wildlife from exposure, but also make the treatment regime most effective in killing rodents and preventing spread of rodenticide resistance. This code of best practice is from the 'Campaign for Responsible Rodenticide Use', and more information on methods that should be used can be found at <u>www.thinkwildlife.org</u>.



⁴ Rattner, B.A. *et al.* 2014. Adverse outcome pathway and risks of anticoagulant rodenticides to predatory wildlife. *Environ. Sci. Technol.* **48** (15): 8433-8445.

	Species	County	10Km Sq.	Year	Month	Incident Type	Toxin / Rodenticide detected	
1	Red kite x 2	2 Down		2018	Apr	Abuse	Carbofuran	
2	Buzzard	Armagh		2018	Oct	Abuse	Carbofuran	

Table 1. All confirmed incidents of persecution of birds of prey recorded in Northern Ireland in 2018.

Table 2. Pesticide abuse incidents in which other wildlife was killed, or indiscriminate baits were recovered, in circumstances which; i) in all likelihood birds of prey were the intended target, or ii) could theoretically have resulted in raptor persecution had they not been discovered and removed.

	Species	County	10Km Sq.	Year	Month	Incident Type	Toxin / Rodenticide detected
1	Hooded crow x 3	Down	J58	2018	Feb	Abuse	Carbofuran
2	Pigeon bait	Tyrone	H27	2018	Jul	Abuse	Carbofuran

Table 3. Carcases tested showing evidence of secondary poisoning by rodenticides in 2018. In these cases ingestion of rodenticide was not deemed to be the cause of death and rodenticides could not be confirmed as being used in an illegal manner.

Species	County	10Km Sq.	Year	Month	Cause of Death	Rodenticide detected		
Buzzard	Antrim	D30	2018	Feb	Peritonitis	Bromadiolone, Difenacoum		
Buzzard	Londonderry	C50	2018	Mar	Starvation	"Coumarins"		
Red kite x 2	Down	J14	2018	Apr	Carbofuran	Brodifacoum, Difenacoum, Flocoumafen, Bromadialone		
Buzzard x 2	Armagh	J05	2018	Jul	Unknown	Brodifacoum, Difenacoum, Flocoumafen		
Kestrel	Down	J34	2018	Aug	Unknown	Difenacoum		
Buzzard	Down	J32	2018	Aug	Unknown	Brodifacoum, Flocoumafen		
Sparrowhawk	Londonderry	H88	2018	Aug	Unknown	Brodifacoum, Difenacoum		
Red kite	Down	J24	2018	Aug	Diazinon	Brodifacoum, Difenacoum		
Buzzard	Antrim	J26	2018	Sep	Unknown	Brodifacoum, Difenacoum, Flocoumafen		
Red Kite	Down	J25	2018	Nov	Unknown	Brodifacoum, Difenacoum, Flocoumafen		

Table 4. All confirmed bird of prey victims of persecution (including nest destruction) recorded in Northern Ireland between 2009 and 2018 and incidents where other illegally poisoned animals, or illegal baits, were recovered in circumstances that could theoretically have resulted in raptor persecution. *NB. Figures relate to the total number of animals found.*

	Buzzard	Red Kite	Peregrine Falcon	Sparrowhawk	Golden Eagle	Merlin	White-tailed Eagle	Hen Harrier	Sub-total	Other Animal	Bait only	Total
2009	3	1							4	5	1	10
2010	5		3		1				9		1	10
2011	3	1							4	2	2	8
2012	2		1	1					4	1		5
2013	6	5				1	1		13	1		14
2014	4	4	2	1					11	1		12
2015	3		3						6	1		7
2016	3		2	1					6			6
2017	3	1	2	1				1	8			8
2018	1	2							3	3	1	7
Total	33	14	13	4	1	1	1	1	68	14	5	87



←The rock and tether used to anchor a live pigeon, covered in poison (carbofuran) in Co. Tyrone in 2018.

Hot Spot Mapping

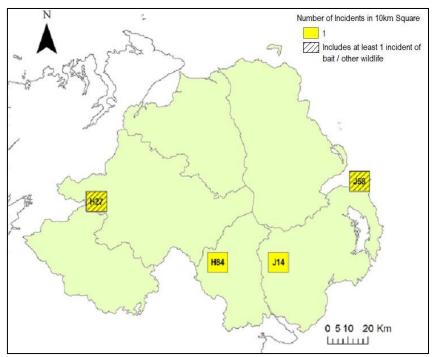


Figure 1. Confirmed incidents of persecution of birds of prey and illegally poisoned baits and other wildlife (see Table 1 and text above for details) reported in Northern Ireland in 2018. The map shows incidents on a 10km-square scale. *Please note that the number of incidents does not indicate the number of birds killed*

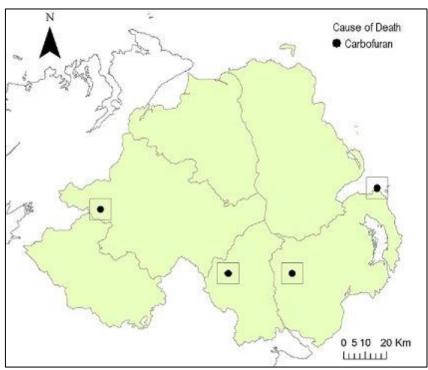


Figure 2. Confirmed incidents of persecution of birds of prey and illegally poisoned baits and other wildlife reported in 2018 in Northern Ireland, mapped by incident type (see Table 1 and text above for details). The map shows incidents on a 10km-square scale. *Please note that this map does not indicate the number of birds killed.* N.B. Symbols within squares simply represent an incident in that square, not the actual location.

Confirmed Incidents 2009 to 2018: Ten Years of Persecution

The PAW NI RS has collated data since 2009 which has been published in a series of reports (2009-2013, 2014, 2015-2016 & 2017).

Between 2009 and 2018 the total number of birds of prey confirmed killed or injured in illegal incidents in Northern Ireland was 66, with an additional two incidents of confirmed nest destruction, in 58 confirmed incidents. These incidents were recorded in a total of 20% of 10-km squares in Northern Ireland (n=37). These incidents have involved eight different raptor species, most frequently the common buzzard (49%), red kite (21%), peregrine falcon (19%) and sparrowhawk (6%) (Table 4). Remaining crimes were against golden eagle, white-tailed eagle, merlin and hen harrier (each 1%; Table 4; Figure 5).

There were a further five incidents of poisoned baits (with no other victim) confirmed in this period, in circumstances where it is believed birds of prey were the target, and 14 animals were found poisoned across nine incidents, in circumstances where they may have resulted in raptor persecution had they not been discovered and removed. These 14 incidents occurred across 14 x 10km squares.

This brings the total number of confirmed incidents related to raptor persecution in Northern Ireland to 72 in the past 10 years (2009-2018), located across 46 different 10km squares (24% of squares).

Crimes most frequently involved poisoning (72%) and shooting (22%), with the remaining involving trapping (3%) and nest destruction (3%). There were 52 poisoning incidents involving the abuse of pesticides and/or rodenticides (some involved more than one substance). Of these incidents 32 involved carbofuran, 19 involved alphachloralose and four involved aldicarb and one involved isophenphos.

It is likely that these figures may represent only a fraction of the number of incidents within each category, as incidents may remain undetected and/or unreported, particularly since these are often crimes that occur in remote areas.

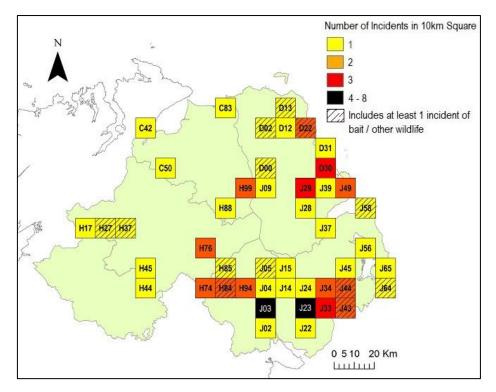


Figure 3. **Ten-year Hot Spot map** of confirmed incidents of persecution of birds of prey, and illegally poisoned baits and other wildlife, reported in Northern Ireland in the period Jan 2009 – Dec 2018. The map shows incidents on a 10km-square scale. Colour coding indicates where more than one incident has occurred in a 10km-square. *Please note that the number of incidents does not indicate the number of birds killed*

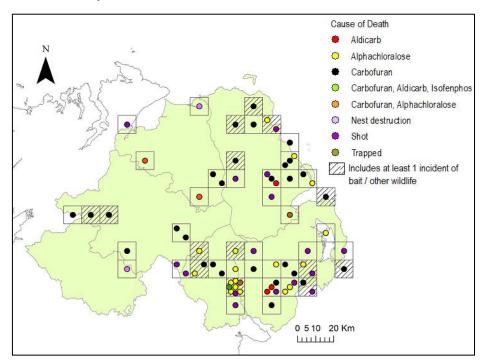


Figure 4. Ten-year Hot Spot map of confirmed incidents of persecution of birds of prey, and illegally poisoned baits and other wildlife, reported in Northern Ireland in the period Jan 2009 – Dec 2018, listed by crime type in each 10km-square. *Please note that the number of incidents does not indicate the number of birds killed.* N.B. Symbols within squares simply represent an incident in that square, not the actual location.

There continues to be an expansion of areas where single incidents of persecution have been detected, rather than the emergence of new 'Hot Spot' areas (areas where confirmed incidents of raptor crime are most frequently detected). The continued emergence of new squares continues to show how widespread raptor persecution in Northern Ireland occurs (Figure 6).

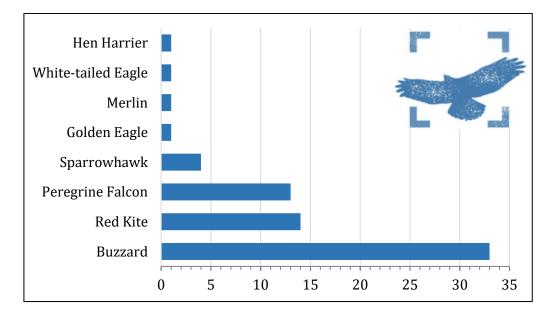


Figure 5. The number of birds of prey injured or killed, or nests destroyed, in confirmed incidents of raptor persecution in Northern Ireland in the period 2009-2018.

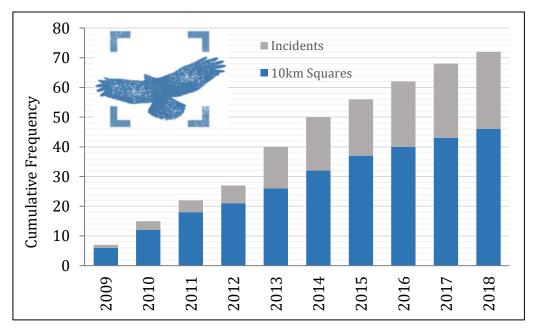


Figure 6. The cumulative number of confirmed incidents related to raptor persecution, and number of 10km squares in which confirmed incidents were recorded, in Northern Ireland in the period 2009-2018.

Carbofuran & Aldicarb

There is continued concern at the use of the highly toxic, illegal pesticides in the period 2009- 2018.

Carbofuran, most commonly marketed as 'Furadan' was used as a pesticide on plants up until it was banned in the late 2000s, when evidence made it clear that the chemical is highly toxic to human health and the environment. The authorisations for plant protection products containing carbofuran were withdrawn by European Member States by 13 December 2007, with any period of grace granted expiring in December 2008 at the latest (2007/416/EC). This followed the banning of a similarly toxic substance, aldicarb, most commonly marketed as 'Temik'; authorisations for plant protection products containing aldicarb were withdrawn by Member States by September 2003 and a phased withdrawal of uses expired by December 2007. Both aldicarb and carbofuran are extremely toxic to humans and wildlife and should not be used under any circumstances – there is no legal reason to possess these chemicals.

Carbofuran and/or aldicarb has been recorded as the cause of death of 31 dead raptors in 19 different 10km squares in Northern Ireland between 2009 and 2018, across 27 different incidents (Figure 7). These banned pesticides have also been confirmed in 11 baits or other wildlife, in situations where raptors could have consumed the bait/ other wildlife, in a further eight incidents in eight x 10km squares in that period. The usage of these substances appears to remain widespread, confirmed in 14% of all 10km squares in Northern Ireland. This is a highly toxic substance, which poses a real danger to the public, as well as wildlife and companion animals and its use is completely illegal across Europe.

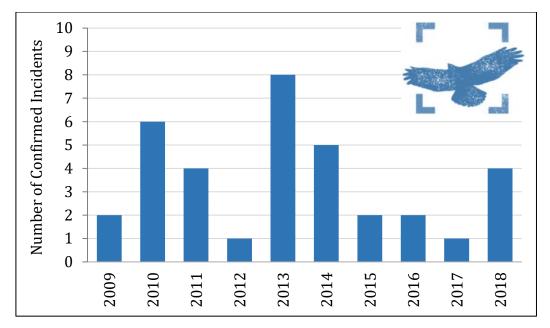


Figure 7. The number of confirmed incidents related to bird of prey persecution which involved carbofuran and/or aldicarb in the period 2009-2018.



← Red kite 'Brown-Red 63' died on her nest in 2018, where she had been incubating three eggs, after ingesting poison (carbofuran) delivered by her mate, who also subsequently died close-by. (Photo ©A. Ferguson)

ACTIONS TAKEN

In order to increase awareness and promote recognition and reporting, and to increase the likelihood of successful prosecution in the near future, several actions have been identified and undertaken by the PSNI and other members of the PAW NI RS:

- 'Hawk-Eyes', an ongoing multi-agency initiative, was launched in 2019. This
 project sees the use of satellite tags on several species of birds of prey in Northern
 Ireland, to monitor survival, alongside a public awareness campaign. More about
 this initiative can be read <u>here.</u>
- NIRSG scientists, along with PSNI officers, carry out the fitting of leg-rings, under special licences, at a number of peregrine falcon sites across the country as part of ongoing research studies on this species. NIRSG scientists have also been installing cameras under licence at peregrine nest sites, in order to monitor adults and nestlings and to identify individual peregrines. RSPB and NIRSG fieldworkers have also undertaken the fitting of patagial wing-tags to buzzards and red kites. This information contributes to knowledge about the movements of birds of prey and their survival, and ongoing monitoring by remote cameras across Northern Ireland will continue indefinitely.
- 'Operation Raptor' was launched by PSNI in March 2016. This initiative targets hot-spot areas identified in the persecution reports in a bid to encourage the public to report wildlife crime and to deter potential offenders. Operation Raptor continues to be promoted by PAW NI to remind the public that PSNI are committed to working with partner agencies to tackle wildlife crime through prevention as well as enforcement.
- Operation Peregrine Watch (launched 2017) is an ongoing NWCU initiative to prevent and stop any peregrine persecution and this can include theft of eggs and chicks from nests and/or the killing of adults and/or chicks through poisoning, shooting or trapping at any time of the year. This joint initiative between PSNI, NIRSG and NIEA, continued throughout 2018 and saw the Air Support Unit (ASU) from PSNI use an unmanned aerial vehicle (UAV) fitted with specialist cameras to monitor peregrine nest sites in 'Hot Spot' areas to assist in prevention of persecution.

• The Raptor Persecution awareness leaflet was redesigned and printed in an effort to bring up-to-date with the 'Watch Out for Wildlife Crime' message. The updated leaflet can be accessed <u>here</u> ⁵.

GOING FORWARD

In order to;

- increase the reporting, recording and analysis of raptor injuries and mortality incidents
- increase public awareness and education about the issues surrounding crimes against birds of prey
- ► help combat illegal bird of prey persecution and poisoning in Northern Ireland,
- ► help secure a successful prosecution,

the PAW NI RS has collectively agreed the following;

- To support PSNI and AFBI in developing a good practice working arrangement surrounding the collection, delivery and testing of incidents of different types, to maximise the likelihood of determining cause of death, and maintain records which could be used in a prosecution.
- To maintain an ongoing review of protocols, to identify any factors which may be improved upon going forward.
- To continue to encourage the DAERA Pesticides Branch to attend PAW NI RS meetings.
- To review staff changeovers within partnership organisations and invite new represenatives accordingly.
- To maintain a review of the availability of additional resources, research and techniques to help support the ongoing work.
- To explore and develop new initiatives to raise the awareness of, increase the reporting of, and to deter, wildlife crime.
- To investigate the possibility of funding streams for additional raptor tracking hardware for Hawk-Eyes.

⁵ <u>https://docs.wixstatic.com/ugd/259455_67750c0253004a558102e14ea436f7c0.pdf</u>

- To review the possibility of a disposal scheme (amnesty) for banned substances including carbofuran and aldicarb.
- To provide assistance to AFBI in the identification of raptors submitted for testing.
- To continue to use the Wildlife Department in PSNI as the point of contact for information and advice in suspected wildlife crime cases.
- The PSNI will continue to carry out searches in the areas identified in this report, and when future incidents occur, in collaboration with the HSE NI and NIEA where there is information available to do so.
- To continue to identify, and engage with, other stakeholders or partners to maximise participation in future reporting e.g. Council Animal Welfare Officers, local council biodiversity officers, veterinarians etc.
- To raise the profile of each incident on a case-by-case basis, an important tool in obtaining intelligence information relating to specific crimes. However it is necessary that that the PSNI/ WLO and/or PSNI Investigating Officer be consulted before information is to be highlighted in the public domain to ensure any ongoing investigation is not compromised.
- To continue to support the Campaign for Responsible Rodenticide Use (<u>www.thinkwildlife.org</u>) 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.
- To continue to raise the profile of Operation Raptor and Operation Peregrine Watch as and when required.

The PAW NI RS partner organisations recognise the increased efficacy of the collaboration of effort, knowledge and analysis gained by compiling these annual reports and will endeavour to continue to maintain the working partnership facilitated by the PAW NI RS. All partners recognise the value in review and improvement of systems and knowledge relating to the illegal killing of birds of prey.

www.wildlifecrimeni.org



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