R.A.P.T.O.R.

Recording and Addressing Persecution and Threats to Our Raptors

2016

Department of Agriculture, Food and the Marine
An Roinn Talmhaíochta, Bia agus Mara

An Roinn Cultúir, Oidhreachta agus Gaeltachta
Department of Culture, Heritage and the Gaeltacht

An Roinn Caiteachais Phoiblí agus Athchóirithe
Department of Public Expenditure and Reform

REPORT PREPARED BY

NATIONAL PARKS & WILDLIFE SERVICE
DEPARTMENT OF CULTURE, HERITAGE AND THE GAELTACHT

UTILISING ANALYSIS AND RESULTS FROM

REGIONAL VETERINARY LABORATORIES,
DEPARTMENT OF AGRICULTURE, FOOD AND THE MARINE

AND

THE STATE LABORATORY
DEPARTMENT OF PUBLIC EXPENDITURE AND REFORM

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SUMMARY

This is the sixth annual report from the RAPTOR scheme detailing direct threats and pressures (other than habitat related threats and pressures) facing birds of prey in Ireland. A key objective of the RAPTOR scheme is to provide a platform for informed, targeted and effective approaches in addressing these threats and pressures.

Poisoning (whether intentional or not) and persecution (always illegal) are of particular concern. Poisoning of any wildlife (other than rats or mice) is recorded, because in the vast majority of cases raptors could have ingested the same poison, or fed on prey that had itself been poisoned.

In 2016, a total of 26 incidents were confirmed in Ireland. These incidents were comprised of 19 poison incidents, 6 incidents where birds of prey were shot and one incident involving a collision with a vehicle (for clarity, some incidents involved more than one issue). A number of suspected and unconfirmed incidents were also recorded. Such incidents are held on the NPWS RAPTOR database. Such cases are as informative and important as confirmed cases in providing data on threats to our raptors. Other cases were submitted under the RAPTOR protocol but found to be negative, inconclusive or involving birds of prey that died from natural causes.

Of the raptors species confirmed to have died as a result of direct human impact in 2016, the most frequent casualty was Common Buzzard (11), followed by Peregrine Falcon (3), Kestrel (1), Red Kite (1) and Barn Owl (1).

1. INTRODUCTION

This is the sixth annual report derived from a national scheme to monitor human related injury and mortality in Irish birds of prey, as well as any incidents of poisoned bait. The scheme is known as the RAPTOR (Recording and Addressing Persecution and Threats to Our Raptors) scheme.

In 2011, a protocol for dealing with threats and disturbance to birds of prey was agreed between the National Parks & Wildlife Service (Department of Culture, Heritage & the Gaeltacht), the Veterinary Laboratory Service (Department of Agriculture, Food and Marine) and The State Laboratory (Department of Public Expenditure & Reform). The full text of the protocol as updated in 2013 is presented in Appendix 4. The majority of records produced in this report have been derived from work under this protocol. The NPWS RAPTOR Database was also set up in 2011.

The national scheme to monitor human, non-habitat related disturbance to Irish birds of prey and other wildlife species has seven key aims:

1. Monitoring anthropogenic non-habitat related impacts on birds of prey, including but not limited to poisoning and persecution
2. Collection of evidence to support prosecutions for illegal persecution or use of poisoned meat baits
3. Monitoring the incidence of anthropogenic non-habitat related impacts on other vulnerable species (e.g. Raven)
4. Monitoring the incidence of poisoning in species vulnerable to secondary poisoning by rodenticides (in particular Common Buzzard, Barn Owl, Kestrel, Red Kite and Long-eared Owl)
5. Maintaining a database of incidents to provide intelligence to counteract anthropogenic non-habitat related impacts on birds of prey in Ireland

6. Providing evidence of the causes of death of other wildlife species where poison is strongly suspected
7. Quantifying the use of specific poisons.

The incident recording database maintained by the National Parks & Wildlife Service incorporates various human related incidents of raptor deaths, disturbance or injury such as road casualties, poisoning, persecution and collisions (e.g. with fences, wind turbines and power lines). Impacts of habitat change are not recorded in this protocol.

The primary aim of this report is to catalogue all records of human non-habitat related disturbance and threats to birds of prey. Doing so will add to the datasets of previous years and build a clear and robust picture of poison and persecution incidents, with data including poison and persecution methods, peaks months for incidents, associated land-use types, black spot areas and much more. The recording, analysis and reporting of such data allows a more informed approach to dealing with these issues by means of education, enforcement and/or forward planning. The addition of information on other types of mortality and injury gives a more complete picture of the threats to wildlife.

2. CONFIRMED RAPTOR CASES AND INCIDENTS 2016

An 'incident' under the RAPTOR protocol is classed as the occurrence of a non-habitat related anthropogenic impact on a bird of prey or the use of poisoned meat bait. A single case may involve more than one incident (e.g. a case of a bird of prey poisoned by poisoned meat bait involves two incidents). Table 1 lists all RAPTOR incidents that were confirmed and recorded in 2016, while Figure 2 displays the geographical location of these incidents. In total in 2016, 26 incidents across 23 cases were confirmed and recorded in 2016.

Table 1. Confirmed RAPTOR cases and incidents 2016

No.	10km	County	Month	Bait	Receiving Species	Incident Type	Comments
1	S86	Wicklow	Jan	-	Common Buzzard	Shot	
2	L75	Galway	Feb	Sausages	(Dog)	Poisoned Bait	Nitroxynil, poisoned a dog
3	T07	Wicklow	Mar	-	Sparrowhawk	Poison	Brodifacoum, Difenacoum and Flocoumafen
4	T18	Wicklow	Mar	-	Red Kite	Poison	Carbofuran, Difenacoum Flocoumafen
5	F73	Mayo	Mar	-	Peregrine Falcon	Poison	Bromadiolone and Flocoumafen
6	O10	Wicklow	Apr	Lamb Carcasses	-	Poisoned Bait	Paraquat
7	O16	Dublin	Apr	-	Common Buzzard	Poison	Brodifacoum

8	W65	Cork	May	-	Peregrine Falcon	Poison	Brodifacoum
9	N46	Westmeath	Jul	-	Peregrine Falcon	Shot	Had to be euthanized due to severity of injuries
10	S17	Tipperary	Aug	-	Common Buzzard	Shot	
11	N50	Laois	Aug	Woodpigeon	Common Buzzard	Poisoned by Poisoned Bait (as per 12 and 13)	Carbofuran. Linked with other cases in N50 August 2016)
12	N50	Laois	Aug	Woodpigeon	Common Buzzard	Poisoned by Poisoned Bait (as per 11 and 13)	Carbofuran. Linked with other cases in N50 August 2016)
13	N50	Laois	Aug	Woodpigeon	Common Buzzard	Poisoned by Poisoned Bait (as per 11 and 12)	Carbofuran. Linked with other cases in N50 August 2016)
14	N50	Laois	Aug	Woodpigeon	-	Poisoned Bait (separate bait to 11, 12 and 13)	Carbofuran. Linked with other cases in N50 August 2016)
15	N00	Tipperary	Aug	-	Common Buzzard	Shot	
16	S96	Wexford	Oct	-	Common Buzzard	Shot and Poison	Brodifacoum present, shooting cause of death
17	M80	Tipperary	Oct	-	Barn Owl	Poison	Brodifacoum
18	O30	Wicklow	Oct	-	Common Buzzard	Collision and Poison	Difethialone and Flocuomafen present. Collision cause of death
19	S55	Kilkenny	Oct	-	Common Buzzard	Poison	Flocoumafen

20	N36	Westmeath	Nov	-	Common Buzzard	Shot	Rehabilitated and released back to wild Nov 2017
21	H22	Cavan	Nov	-	Kestrel	Poison	Bromadiolone
22	B81	Donegal	Dec	Mince	(Dog)	Poisoned Bait	Nitroxynil, Methiocarb sulfoxide and Methiocarb on Minced Meat poisoned a dog
23	O14	Dublin	Dec	-	Common Buzzard	Poison	Brodifacoum

Figure 1 compares the amount and type of poison and persecution incidents recorded in between 2011 and 2016.

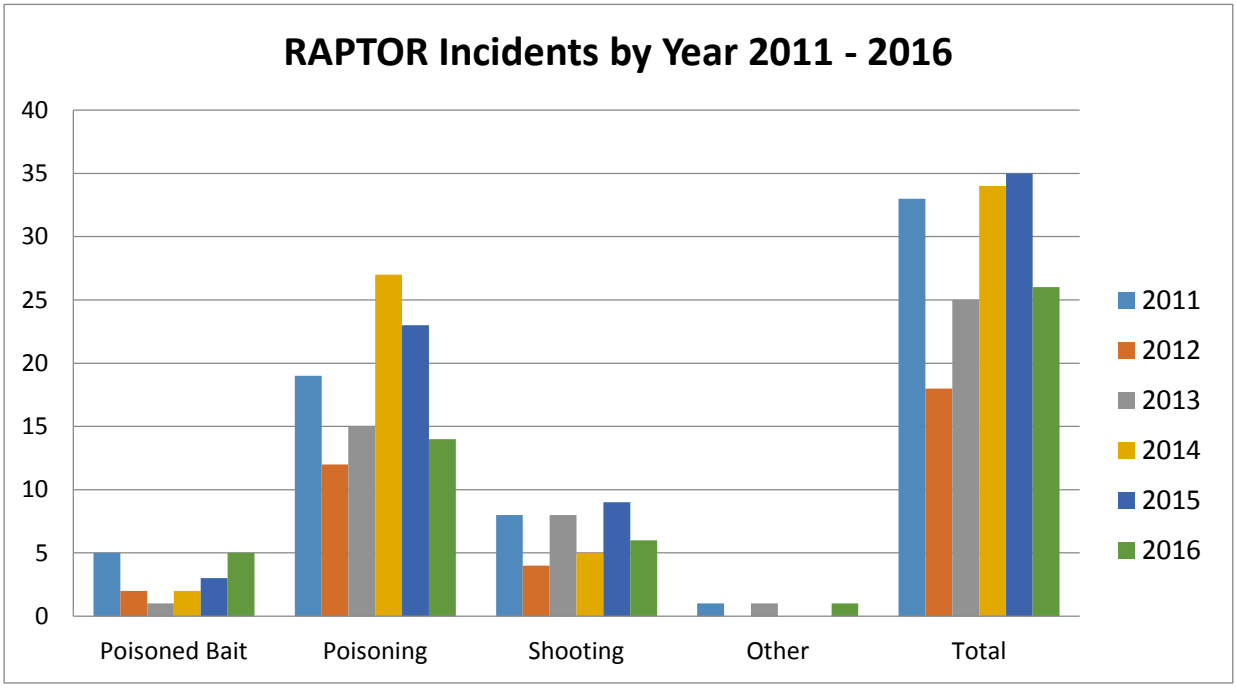

Figure 1. Annual RAPTOR incidents 2011 to 2016.

Figure 2 shows the distribution of RAPTOR incidents in 2016.

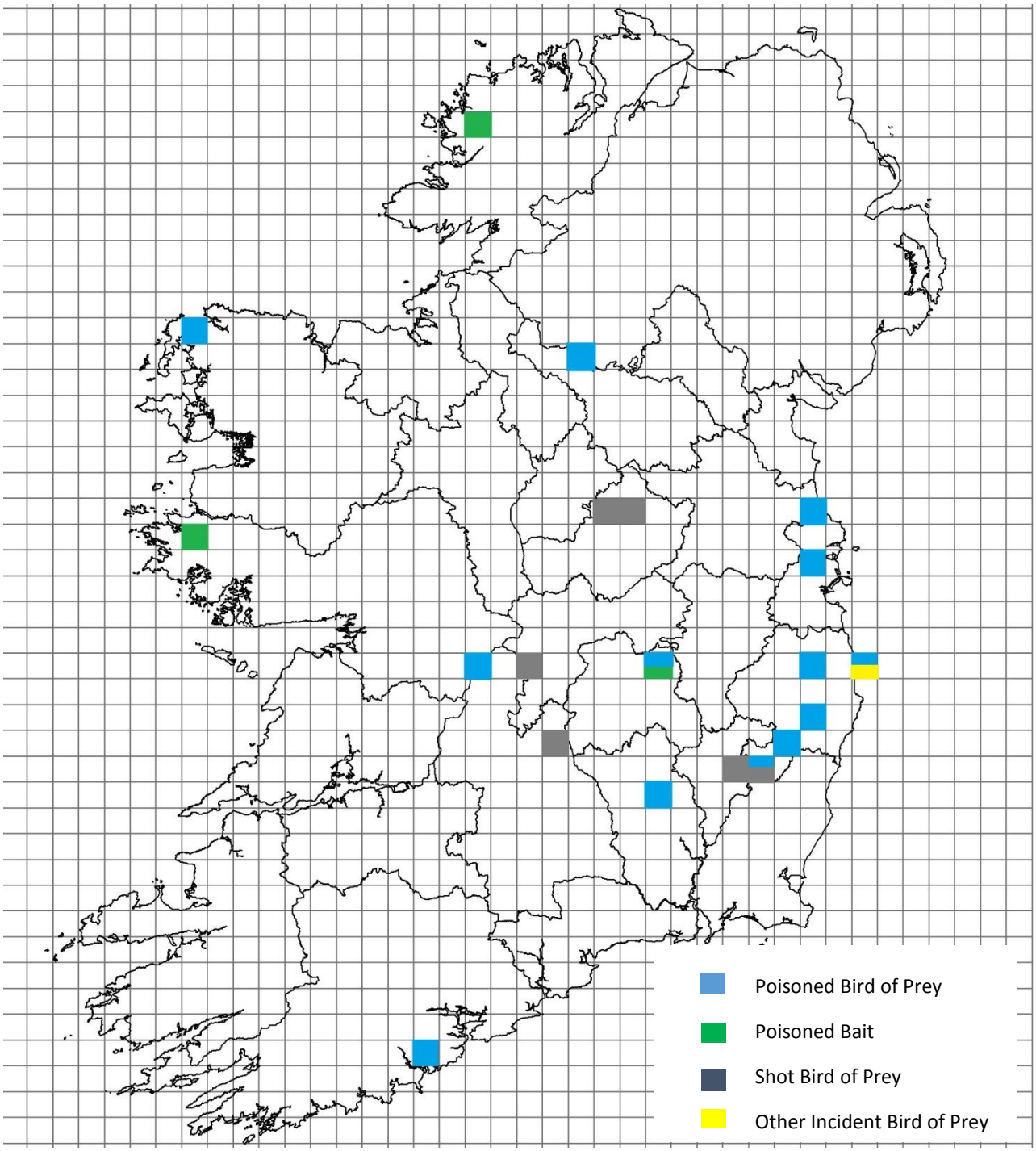

Figure 2. Map of Confirmed Poisoning and Persecution Incidents in Ireland 2016.

Figure 3 summarises the number of illegal incidents on a monthly basis in 2016, whereby use of illegal poison, poison meat bait or shooting was confirmed (i.e. rodenticide poisoning and collisions found in 2016 are excluded).

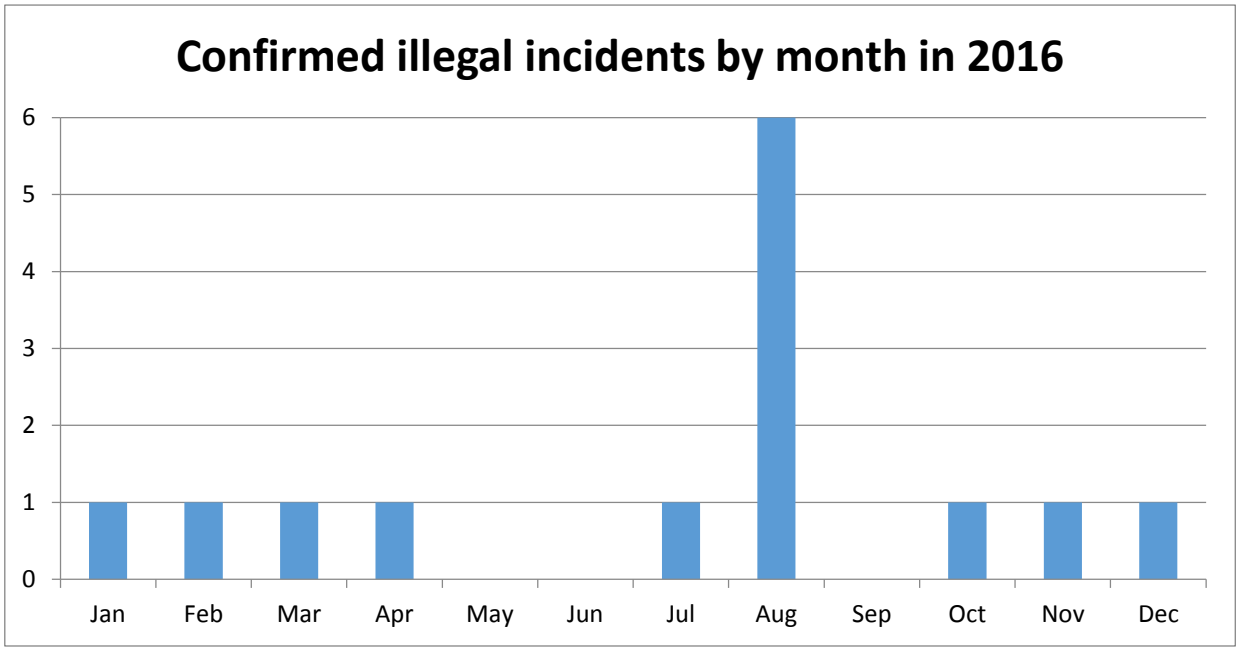

Figure 3. Confirmed illegal incidents per month in 2016.

3. DISCUSSION OF RESULTS

After a record number of confirmed poison and persecution incidents recorded in 2015, 2016 saw a return towards an average number of confirmed incidents in a calendar year. As referenced in previous reports, the number recorded is likely to be only a fraction of the number of incidents that occurred in total. The monitoring scheme has continued to expand in terms of data and intelligence gathering, giving a more complete picture of anthropogenic threats to our native birds of prey and trends of poisoning and persecution. This data is has been published annually and is available in greater detail to inform the relevant authorities of where best to target actions to prevent such incidents re-occurring and act as a measure of success with regard to actions taken. After six years

of the protocol, there are pointers as to the main threats, the main species targeted, timings, methods and reasons for poisoning and persecution incidents.

As in previous years, a significant proportion of records in 2016 were in the east of the country. Incidents involving poison, persecution or other threats to raptors are however very widespread across the country, as can be seen in Figure 8, with particular poison and persecution black spots where multiple incidents have been recorded between 2007 and 2016.

August saw a surge in confirmed illegal activity against our native birds of prey. A number of these incidents were associated with Pheasant rearing pens in advance of the Pheasant shooting season in September.

The principal poisons that were implicated in RAPTOR incidents in 2016 were Brodifacoum (in 6 cases), Flocoumafen (5), Carbofuran (5), Bromadiolone (2), Difenacoum (3), Nitroxynil (2), Paraquat (1) and Difethialone (1). For the first time, Alphachloralose was not found to be involved in any confirmed poisoning cases. For the first time, Difethialone (an agent used as rat poison) was found to be involved in a confirmed poisoning case (albeit the cause of death in that case was collision). Carbofuran and Methiocarb, despite being banned since 2008 and 2015 respectively, were yet again involved in the poisoning of birds of prey in Ireland. Brodifacoum, Bromadiolone, Difenacoum, and Flocoumafen are second generation anticoagulant rodenticide ingredients that are regularly linked with secondary poisoning of wildlife.

Figure 4 summarises the recorded instances of persecution since 2007, according to species affected. It should be borne in mind that the RAPTOR protocol including a more robust approach to detecting and confirming incidents came into being in 2011, but a certain number of incidents between 2007 and 2010 were previously recorded (see Appendix 1).

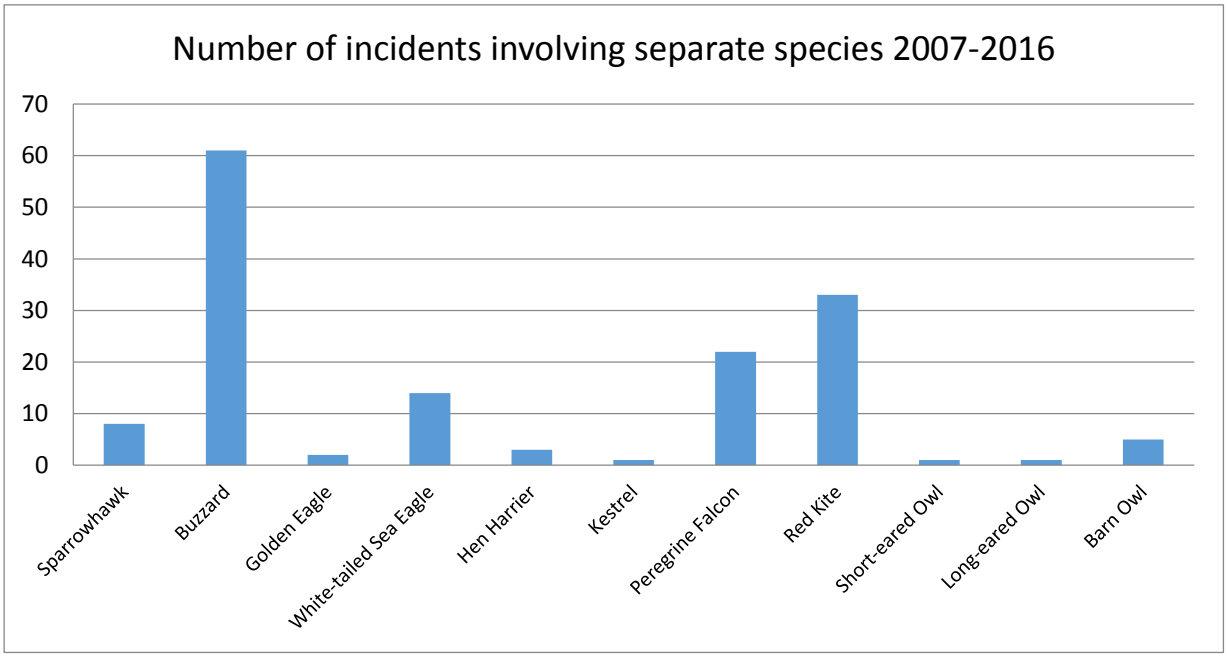

Figure 4. Number of incidents involving separate species 2007 -2016.

Common Buzzard and Red Kite are the two most highly recorded victim species. In the majority of cases, these incidents have been found to originate with Second Generation Anti-coagulant Rodenticides (SGARs) and the poisoning is believed to have been bio-accumulated from the ingestion of rodents and thus is taken to be secondary and unintentional. However, the incidence of deliberate persecution of Common Buzzards had risen in recent years. Barn Owls are also known to suffer a high incidence of poisoning from SGARs, with over 85% of Irish Barn Owls having detectable residues in their systems (J. Lusby pers. comm.), but the number of incidents recorded by the RAPTOR protocol is low. In addition to some Common Buzzards which have also been shot; Kestrel, Hen Harrier, Peregrine Falcon, Sparrowhawk and White-tailed Sea Eagles are among those confirmed to have been lost to poisoning, persecution, collision or disturbance. Peregrine Falcon is of particular concern, with a relatively high number of deliberate persecution incidents (n=14) confirmed since 2010.

Standard toxicology examinations came into being with the RAPTOR protocol in 2011. Figure 5 summarises both the number of incidents and the number of casualties associated with poisoning between 2011 and 2016. The data is presented according to poison type. Poisons are regularly found acting in tandem and until quantitative tests are developed it is not possible to say in all cases that a particular poison was responsible for death.

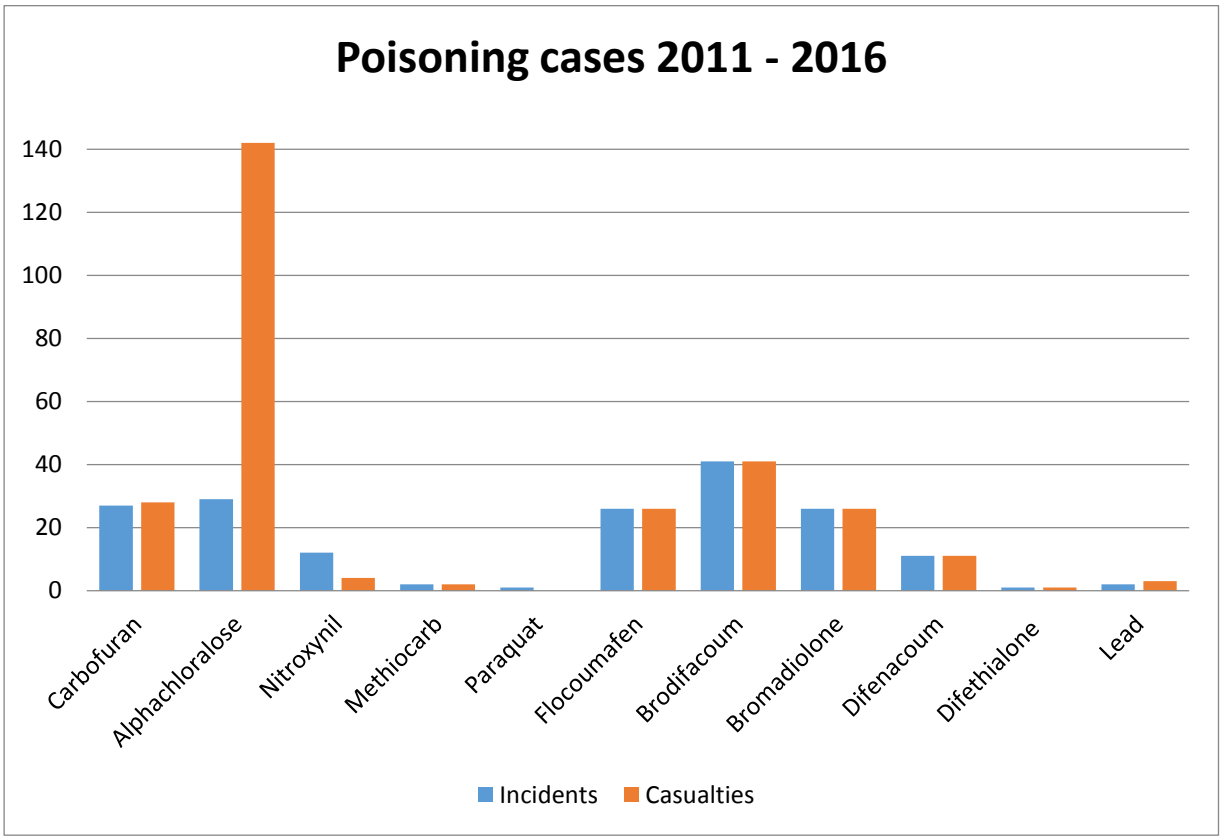

Figure 5. Poisoning Cases 2011 – 2016.

Alphachloralose stands out as the single poison that has been involved in the highest number of casualities recorded since 2011. This is primarily because of single cases involving large numbers of victims. The highly lethal Carbofuran has also been recorded in a relatively large number of incidents, as has the SGAR agent Brodifacoum.

Figure 6 provides a breakdown of prevalence between rodenticide type poisons and other poisons.

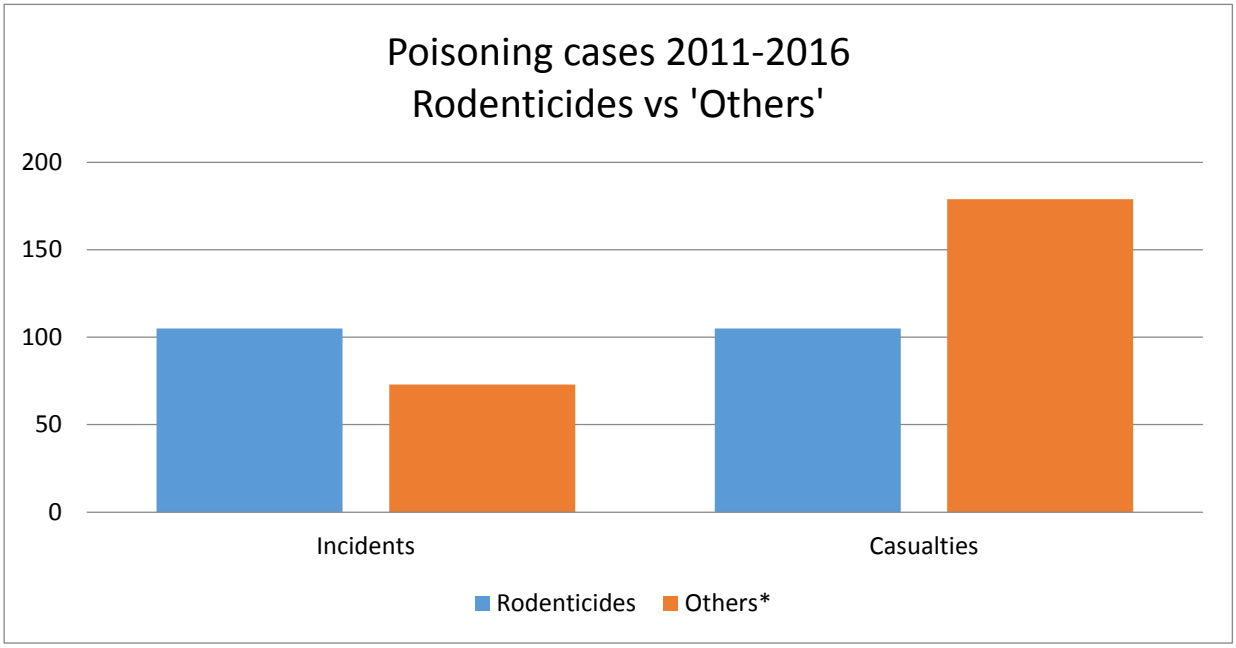

Figure 6. Poisoning Cases 2011 – 2015: Rodenticide vs 'Others'

* includes Alphachloralose

Rodenticides have been recorded in 60% of all incidents recorded and confirmed during the period of the RAPTOR protocol to date. Flocoumafen, Brodifacoum and Bromadiolone have been the main rodenticide compounds found, followed by Difenacoum and Difethialone. As discussed already, their presence and impact is taken to be secondary and unintentional. Nonetheless, they have lethal properties and their presence in protected wildlife is unwelcome. The Campaign for Responsible Rodenticide Use has been established with key objectives that involve reducing the prevalence of rodenticides in protected wildlife (Appendix 5). The other substances found in raptor casualties have been Carbofuran, Alphachloralose, Nitroxynil, Methiocarb, Paraquat and Lead. The incidents involving lead were accidental. The other poisons, sometimes used in combination, would have been used with the intention of targeting wildlife.

4. OTHER DATA RECORDED AND ANALYSED

The database has recorded the land use type with which poisoning and persecution incidents have been associated. While particular trends with regard to land-use type and recent activity in the areas are already emerging, for the time being these will not be reported on publically. Other data recorded includes the age and sex of the birds/animals affected.

5. PROSECUTIONS

At the time of publication, no prosecutions were brought for confirmed illegal activity impacting on birds of prey in Ireland in 2016, but some investigations are ongoing on particular cases.

6. CONCLUSION

After six years of the RAPTOR protocol, it is clear that anthropogenic, non-habitat related threats to Irish raptors are widespread and deadly. There are blackspots throughout the country but this may reflect on-the-ground effort as much as anything else and it would be naive to think that any more than a fraction of raptor poisoning and persecution can be formally discovered and recorded. The chances of finding a bird carcass, considering a varied landscape and terrain, tall vegetation and scavengers can be considered as slim. It is considered even more difficult to discover birds that have been shot illegally, as the perpetrator will often remove or conceal the carcass to reduce the chance of being apprehended.

Dedicated resources, investigations by Authorised Officers, intelligence gathering, training, surveillance and forensic analysis of wildlife crime scenes are all necessary to

combat wildlife crime. The RAPTOR protocol and the information it produces provides an insight on bird of prey poisoning and persecution in Ireland. We now know the species affected, the methods of poisoning and persecution and hotspots of such incidents. Continuing to record confirmed and possible events in a systematic fashion will build on the database and provide stronger background information to target illegal activity through enforcement and education and in turn combat human-related raptor injury and mortality. Likewise, the information garnered from recording and analysing incidents of road, turbine or fence collisions can help inform forward planning on such matters.

Recording information

Members of the public are asked to contact their local National Parks & Wildlife Service office (see www.npws.ie/contactus) or email RAPTOR@chg.gov.ie with any information regarding RAPTOR incidents. These matters will be treated confidentially. If the incident occurs out of normal office hours, please take a photograph of the carcass/poison and record its precise location. The National Parks & Wildlife Service have produced a 'do and don't' information note for those who may encounter or suspect incidents concerning birds of prey in the Republic of Ireland (Appendix 6).

Local wildlife rehabilitators are usually the best placed to treat injured wildlife (see www.irishwildlifematters.ie).

Wildlife rehabilitators are asked to submit annual returns of injuries and deaths of birds of prey to NPWS, using a standard reporting form. Where foul play is suspected, NPWS or An Garda Síochána should be contacted immediately upon receiving the animal or hearing about the incident. For live birds where poisoning is suspected, the first faecal droppings to be passed should be collected and sent via NPWS for testing at the RVLs or State Lab. Carcasses should not be frozen, but can be refrigerated if necessary.

Combating Poisoning and Persecution

The poisoning and persecution protocol agreed between the relevant state agencies is reviewed on an annual basis or as necessary. With regard to enforcement of legislation, the responsible authorities will continue in concerted efforts to combat illegal poisoning

and persecution and the misuse of drugs and biocides. Education is seen as an important tool in this campaign also. The continued reporting and recording of relevant incidents will ensure a targeted and more effective approach.

Detecting poison levels

At present, the tests undertaken under this protocol can detect poison above particular levels but it is not possible to determine the precise level. Tests are being developed at the State Lab to determine exact toxin levels, so that these can be used to provide more certainty as to whether the toxins found in the system were enough to have killed the bird, or whether there may have been sub-lethal effects.

ACKNOWLEDGEMENTS

Members of the public for reporting incidents.

Staff of NPWS for finding, collecting and submitting samples and reporting incidents.

Staff of the Regional Veterinary Laboratories for their professionalism and diligence.

The State Laboratory for expert analysis of toxin levels.

Private veterinary practices for providing x-ray services.

The media for reporting on poisoning and persecution and bringing awareness of these serious issues to the public.

Appendix 1: Persecution and Poisoning Incidents Recorded between 2007 and 2016 (excluding incidents solely relating to other issues)

No.	10km sq	Species	Incident	Date found	County
1	G13	Red Kite	Poison	Oct 2007	Leitrim
2	V98	White-Tailed Sea Eagle	Poison	Nov 2007	Kerry
3	V77	White-Tailed Sea Eagle	Poison	Feb 2008	Kerry
4	V78	White-Tailed Sea Eagle	Poison	Feb 2008	Kerry
5	V77	White-Tailed Sea Eagle	Poison	May 2008	Kerry
6	S69	Hen Harrier	Shot	Sep 2008	Kildare
7	B81	Golden Eagle	Poison	Feb 2009	Donegal
9	T29	Redkite	Poison	Mar 2009	Wicklow
10	V99	White-Tailed Sea Eagle	Poison	Mar 2009	Kerry
11	G74	Golden Eagle	Poison	Feb 2010	Leitrim
12	T39	Red Kite	Poison	Feb 2010	Wicklow
13	T18	Red Kite	Poison	Feb 2010	Wicklow
14	N70	Red Kite	Poison	Mar 2010	Kildare
15	T27	Peregrine Falcon	Poison	Mar 2010	Wicklow
16	XO9	Common Buzzard	Poison	Mar 2010	Waterford
17	W87	Common Buzzard	Poison	Mar 2010	Cork
18	V89	White-Tailed Sea Eagle	Poison	Apr 2010	Kerry
19	V89	White-Tailed Sea Eagle	Poison	Apr 2010	Kerry
20	T08	Red Kite	Poison	Apr 2010	Wicklow
21	B83	Common Buzzard	Poison	Apr 2010	Donegal
22	N55	Common Buzzard	Poison	Apr 2010	Westmeath
23	T27	Peregrine Falcon	Poison	Apr 2010	Wicklow
24	V89	White-Tailed Sea Eagle	Poison	May 2010	Kerry
25	V44	Poison Meat Bait	Poisoned Bait	Mar 2011	Cork
26	F71	Hooded Crow	Poison	Apr 2011	Mayo
27	-	Hooded Crow	Poison	Apr 2011	Kerry
28	S19	Poison Meat Bait	Poisoned Bait	Jul 2011	Offaly
29	S19	Common Buzzard	Poison	Jul 2011	Offaly
30	S19	Common Buzzard	Poison	Jul 2011	Offaly
31	T18	Poison Meat Bait	Poisoned Bait	Jul 2011	Wicklow
32	T18	Peregrine Falcon	Poisoned Bait	Jul 2011	Wicklow
33	O26	Red Kite	Poison	Jul 2011	Dublin
34	S19	Sparrow-hawk	Poison	Jul 2011	Offaly
35	Q96	Peregrine Falcon	Shot	Jul 2011	Clare
36	Q96	Kestrel	Shot	Jul 2011	Clare
37	Q96	Sparrow-hawk	Shot	Jul 2011	Clare
38	N74	Common Buzzard	Shot	Aug 2011	Meath
39	N93	Gulls, Corvids, Pigeons	Poison	Aug 2011	Kildare

40	T27	Common Buzzard	Poison	Aug 2011	Wicklow
41	T27	Red Kite	Poison	Sep 2011	Wicklow
42	H40	Common Buzzard	Shot	Sep 2011	Cavan
43	N80	Common Buzzard	Shot	Oct 2011	Kildare
44	B92	Poison Meat Bait	Poisoned Bait	Nov 2011	Donegal
45	B61	Poison Meat Bait	Poisoned Bait	Nov 2011	Donegal
46	C20	Rook (x20)	Poison	Nov 2011	Donegal
47	O25	Red Kite	Poison	Nov 2011	Dublin
48	O26	Red Kite	Poison	Nov 2011	Dublin
49	T28	Red Kite	Poison	Nov 2011	Wicklow
50	O25	Red Kite	Poison	Nov 2011	Dublin
51	O25	Red Kite	Poison	Nov 2011	Dublin
52	T38	Red Kite	Poison	Dec 2011	Wicklow
53	O25	Red Kite	Poison	Dec 2011	Dublin
54	O25	Red Kite	Poison	Dec 2011	Dublin
55	S77	Common Buzzard	Shot	Dec 2011	Carlow
56	R55	Peregrine Falcon	Shot	2011	Clare
57	R44	Peregrine Falcon	Injury	2011	Limerick
58	N10	-	Poisoned Bait	Jan 2012	Offaly
59	O25	Common Buzzard	Poison	Jan 2012	Dublin
60	N50	Common Buzzard	Poison	Feb 2012	Laois
61	T17	Raven	Poison	Mar 2012	Wexford
62	T00	Rook, Jackdaw, Magpie, Pheasant	Poison	Mar 2012	Wexford
63	V78	-	Poisoned Bait	Mar 2012	Kerry
64	M09	White-tailed Sea Eagle	Poison and Shot	Apr 2012	Mayo
65	G99	White-tailed Sea Eagle	Poison	Apr 2012	Donegal
66	S88	Otter	Poison	May 2012	Wicklow
67	N06	Muscovy Duck	Poison	May 2012	Longford
68	T17	Red Kite	Poison	Sep 2012	Wicklow
69	T29	Red Kite	Poison	Oct 2012	Wicklow
70	T18	Red Kite	Poison	Nov 2012	Wicklow
71	S54	Common Buzzard	Poison	Nov 2012	Kilkenny
72	T02	Hen Harrier	Shot	Nov 2012	Wexford
73	O07	Common Buzzard	Shot	Dec 2012	Meath
74	Q93	Short-eared Owl	Shot	Dec 2012	Kerry
75	V95	White-tailed Sea Eagle	Poison	Jan 2013	Cork
76	T39	Red Kite	Poison	Jan 2013	Wicklow
77	N32	Common Buzzard	Shot	Jan 2013	Offaly
78	S38	Common Buzzard	Shot	Jan 2013	Laois
79	W05	-	Poisoned Bait	Jan 2013	Cork

80	N93	Common Buzzard	Poison	Feb 2013	Kildare
81	S87	1 Common Buzzard, 7 Gulls	Poison	Mar 2013	Carlow
82	T17	Red Kite	Poison	Apr 2013	Wicklow
83	T18	Red Kite	Poison	Apr 2013	Wicklow
84	G10	2 Rooks	Poison	May 2013	Mayo
85	R37	12 Pigeons	Poison	May 2013	Clare
86	O20	Common Buzzard	Poison	Jun 2013	Wicklow
87	S01	Peregrine Falcon	Shot	Jun 2013	Tipperary
88	S22	Peregrine Falcon	Shot	Jun 2013	Tipperary
89	G12	9 Rooks	Poison	Jul 2013	Mayo
90	O07	79 Corvids, 1 Gull	Poison	Jul 2013	Meath
91	S22	Peregrine Falcon	Shot	Jul 2013	Tipperary
92	N09	Sparrowhawk and Hooded Crow	Fen Trap	Aug 2013	Leitrim
93	N87	Sparrowhawk	Shot	Sep 2013	Meath
94	O15	Red Kite	Poison	Sep 2013	Dublin
95	T26	Red Kite	Poison	Sep 2013	Wicklow
96	O20	Red Kite	Poison	Sep 2013	Wicklow
97	O08	Peregrine Falcon	Shot	Sep 2013	Louth
98	T27	Red Kite	Poison	Nov 2013	Wicklow
99	R73	Peregrine Falcon	Shot (and poison)	Dec 2013	Limerick
100	R89	White-tailed Sea Eagle	Shot	Jan 2014	Tipperary
101	S15	Peregrine Falcon	Poison	Jan 2014	Limerick
102	C01	Common Buzzard	Poison	Jan 2014	Donegal
103	H61	Common Buzzard	Poison	Jan 2014	Monaghan
104	H52	Common Buzzard	Poison	Jan 2014	Monaghan
105	N99	Common Buzzard	Poison	Feb 2014	Louth
106	S97	Raven	Poison	Mar 2014	Wicklow
107	T39	Red Kite	Poison	Mar 2014	Wicklow
108	R44	Buzzard	Poison	Mar 2014	Limerick
109	M32	Sparrowhawk	Poison	Mar 2014	Galway

110	X19	Sparrowhawk	Poison	Mar 2014	Waterford
111	S40	Peregrine Falcon	Poison	Mar 2014	Waterford
112	S40	Peregrine Falcon	Poison	Mar 2014	Waterford
113	S40	Peregrine Falcon	Poison	Mar 2014	Waterford
114	X19	Sparrowhawk	Poison	Apr 2014	Waterford
115	X19	Peregrine Falcon	Poison	Apr 2014	Waterford
116	S15	Peregrine Falcon	Poison	May 2014	Tipperary
117	N81	Common Buzzard	Poison	May 2014	Kildare
118	C32	-	Poisoned Bait	May 2014	Donegal
119	X29	Common Buzzard	Shot	Jun 2014	Waterford
120	O22	-	Poisoned Bait	Jun 2014	Dublin
121	B81	Kestrel	Poison	Jun 2014	Donegal
122	N50	Common Buzzard	Shot	Jul 2014	Laois
123	O25	Barn Owl	Poison	Aug 2014	Dublin
124	V57	White-tailed Sea Eagle	Poison	Sep 2014	Kerry
125	T39	Common Buzzard	Poison	Oct 2014	Wicklow
126	O25	Common Buzzard	Poison	Oct 2014	Dublin
127	R65	Kestrel	Poison	Nov 2014	Limerick
128	S95	Common Buzzard	Shot	Nov 2014	Wexford
129	T05	Common Buzzard	Shot	Nov 2014	Wexford
130	O14	Common Buzzard	Poison	Nov 2014	Dublin
131	O13	Common Buzzard	Poison	Dec 2014	Dublin
132	O25	Common Buzzard	Poison	Dec 2014	Dublin
133	W87	Common Buzzard	Poison	Dec 2014	Cork
134	V46	Hen Harrier	Shot	Jan 2015	Kerry
135	W87	Common Buzzard	Poison	Jan 2015	Cork
136	C31	Common Buzzard	Poison	Jan 2015	Donegal
137	T29	Red Kite	Poison	Jan 2015	Wicklow
138	T16	Red Kite	Poison	Jan 2015	Wexford
139	N91	Common Buzzard	Shot and Poison	Jan 2015	Wicklow
140	T27	Common Buzzard	Poison	Jan 2015	Wicklow
141	N93	Common Buzzard	Shot and Poison	Feb 2015	Kildare
142	O14	Common Buzzard	Poison	Feb 2015	Dublin
143	T29	Red Kite	Poison	Feb 2015	Wicklow
144	N94	Rooks, Jackdaw, Grey Crow (50 birds)	Poison	Mar 2015	Meath
145	M41	Common Buzzard	Poison	Mar 2015	Galway

146	M72	-	Poisoned Bait	Mar 2015	Galway
147	R72	Sparrowhawk	Shot	Mar 2015	Limerick
148	O03	Barn Owl	Poison	Apr 2015	Meath
149	L74	White-tailed Sea Eagle	Poison (and Poisoned Bait)	Apr 2015	Galway
150	O01	Long-eared Owl	Poison	May 2015	Wicklow
151	M71	Peregrine Falcon	Poison	May 2015	Galway
152	M73	Barn Owl	Poison	May 2015	Galway
153	M65	Barn Owl	Poison	May 2015	Galway
154	T38	Red Kite	Poison	Jun 2015	Wicklow
155	S91	Common Buzzard	Poison	Jun 2015	Wexford
156	S91	Common Buzzard	Poison	Jun 2015	Wexford
157	T28	Red Kite	Poison	Jul 2015	Wicklow
158	N91	Common Buzzard	Poison	Jul 2015	Wicklow
159	S03	Common Buzzard	Shot	Jul 2015	Tipperary
160	S95	Common Buzzard	Shot and Poison	Jul 2015	Wexford
161	S83	Common Buzzard	Shot and Poison	Jul 2015	Wexford
162	O25	Kestrel	Poison	Sep 2015	Dublin
163	J00	Hooded Crow (and dogs)	Poisoned Bait	Sep 2015	Louth
164	R54	Peregrine Falcon	Shot	Sep 2015	Limerick
165	M22	Starlings (5 birds)	Poisoned Bait	Sep 2015	Galway
166	T27	Common Buzzard	Poison	Oct 2015	Wexford
167	N41	Common Buzzard	Shot	Oct 2015	Offaly
168	N50	Kestrel	Poison	Dec 2015	Offaly
169	S86	Common Buzzard	Shot	Jan 2016	Wicklow
170	L75	(Dog)	Poisoned Bait	Feb 2016	Galway
171	T07	Sparrowhawk	Poisoned	Mar 2016	Wicklow
172	T18	Red Kite	Poisoned	Mar 2016	Wicklow
173	F73	Peregrine Falcon	Poisoned	Mar 2016	Mayo
174	O10	-	Poisoned Bait	Apr 2016	Wicklow

175	O16	Common Buzzard	Poisoned	Apr 2016	Dublin
176	W65	Peregrine Falcon	Poison	May 2016	Cork
177	N46	Peregrine Falcon	Shot	Jul 2016	Westmeath
178	S17	Common Buzzard	Shot	Aug 2016	Tipperary
179	N50	Common Buzzard	Poison (and Poisoned Bait)	Aug 2016	Laois
180	N50	Common Buzzard	Poison (and Poisoned Bait)	Aug 2016	Laois
181	N50	Common Buzzard	Poison (and Poisoned Bait)	Aug 2016	Laois
182	N50	-	Poisoned Bait	Aug 2016	Laois
183	N00	Common Buzzard	Shot	Aug 2016	Tipperary
184	S96	Common Buzzard	Shot and Poisoned	Oct 2016	Wexford
185	M80	Barn Owl	Poison	Oct 2016	Tipperary
186	O30	Common Buzzard	Collision and Poisoned	Oct 2016	Wicklow
187	S55	Common Buzzard	Poison	Oct 2016	Kilkenny
188	N36	Common Buzzard	Shot	Nov 2016	Westmeath
189	H22	Kestrel	Poison	Nov 2016	Cavan
190	B81	(Dog)	Poisoned Bait	Dec 2016	Donegal
191	O14	Common Buzzard	Poison	Dec 2016	Dublin

Appendix 2: Distribution of poisoning and persecution incidents between 2007 and 2016.

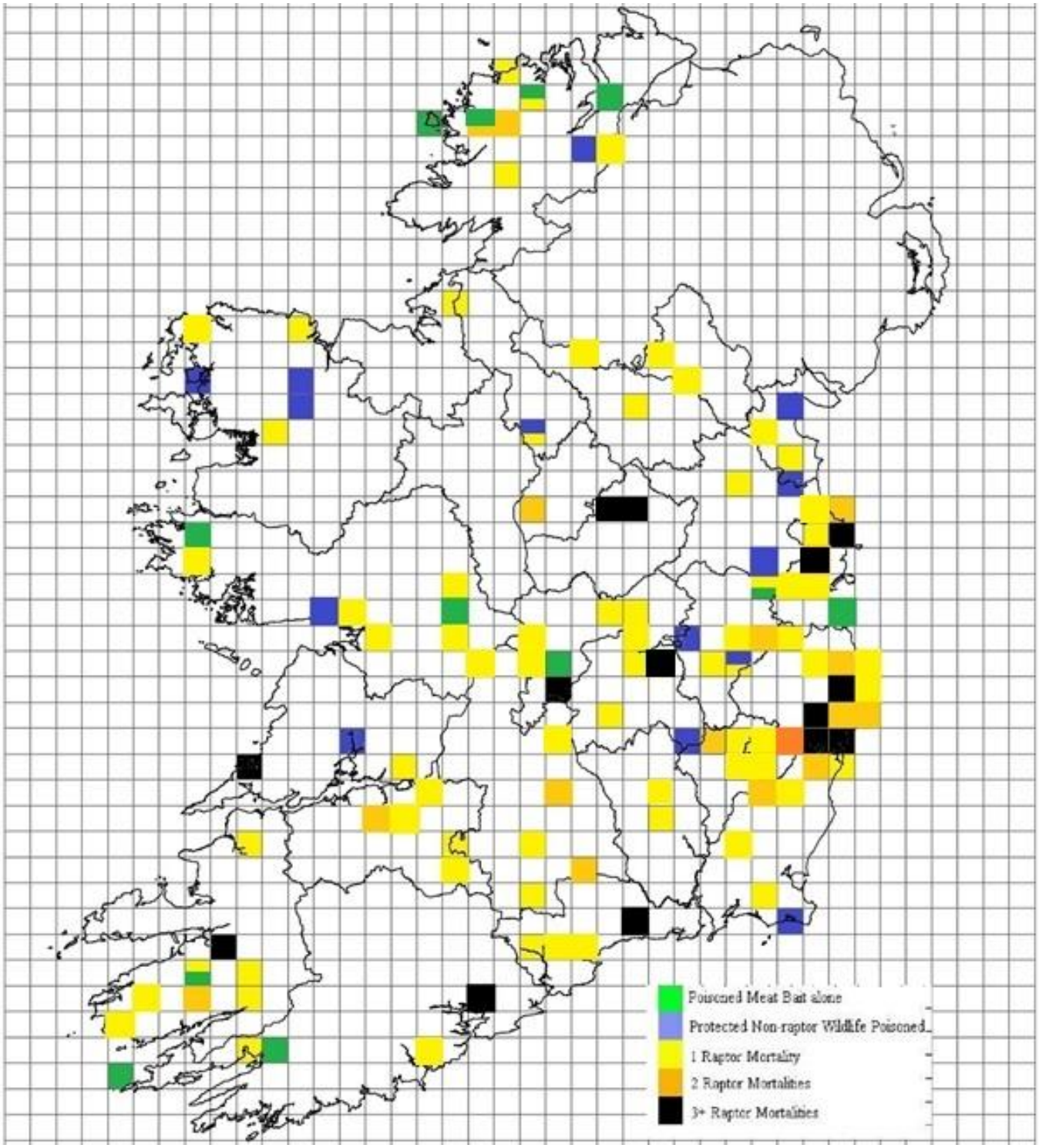

Figure 8. All poison and persecution incidents recorded between 2007 and 2016.

Appendix 3: Key Legislation

There are a number of key Irish statutes that deal with the poisoning and persecution of wildlife. The Wildlife acts 1976, 2000 and 2010 are the primary Acts concerning the protection of wildlife in Ireland. Under the Wildlife Acts, in line with the EU Birds Directive (2009/147/EC), all birds in Ireland are protected. Article 9 of the Birds Directive allows Member States to make derogations from its protective measures in the interests of public health and safety, air safety, to protect flora and fauna and to prevent serious damage to crops, livestock, forests, fisheries and fauna. The European Communities (Wildlife Act, 1976) (Amendment) Regulations, 1986 – (S.I. No. 254 of 1986) allow specific derogations to be implemented by way of Ministerial Declarations, which are renewed every four months. The species included in the Irish Ministerial Declarations are grey crows, magpies, rooks, jackdaws and some members of the pigeon family. Until the beginning of 2008, poisoned or anesthetic bait was allowed for control of grey crows, magpies and pigeons. From 1 January 2008, the Ministerial Declarations allowed the use of non-meat baits only when laying poison for the control of grey crows, magpies and pigeons. The change was made due to concerns that the use of meat baits could lead to the accidental poisoning of birds of prey such as the reintroduced species. Ministeral Declarations with effect from September 2010 have prohibited the use of any poisoned or anaesthetic bait for the control of grey crows and magpies. Thereafter, grey crows and magpies could only be controlled by shooting or the use of legal cage traps. The provision in the Ministerial Declarations on the use of non meat-based poisoned or anaesthetic bait to control certain species of pigeon was retained on the basis of a licensing regime by National Parks & Wildlife Service.

There are various directives and regulations concerning the use of biocides and poisons in the EU and Ireland (e.g. Poisons Regulations 2008; Use and Control of Biocidal Products) Regulations, 2001) and it is illegal to sell or use any pesticides/biocides in a manner which is not registered or approved. Since 2008 there has been no pesticide/biocide registered for use in the control of birds or any mammal other than rabbits, rats or mice. Proper use is ensured through inspections at wholesale, retail and farm level and through the testing of food commodities on the Irish market for the presence of pesticides

residues. The State took prosecutions in 2009 and 2010 which led to convictions and fines against landowners using Alphachloralose to kill rooks. The Restrictions on Use of Poison Bait Regulations (SI No. 481 of 2010) underpin the legalities relating to poison bait. The Animal Health and Welfare Act (2013) outlines an offence where a person lays "poison by a method or in a manner that a protected animal has or would have access to the poison."

The conservation of biodiversity in Ireland has been strengthened and expanded by EU law, most notably by the EU Birds Directive and EU Habitats Directive (92/43/EEC) and also by the EIA Directive (85/337/EEC). The European Communities (Birds and Natural Habitats) Regulations 2011 consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats)(Control of Recreational Activities) Regulations 2010. Many of our native raptors (including Peregrine Falcon, Merlin, Hen Harrier, Golden Eagle, White-tailed Sea Eagle and Red Kite) are listed on Annex I of the EU Birds Directive (Directive 2009/147/EC). Special Protection Areas (SPAs) may be designated to protect the habitats and ranges of these species. Article 4(4) of the same directive requires that even outside of SPAs, Member States shall strive to avoid pollution or deterioration of habitats of these birds.

For farmers, poisoning of bird species is a breach under cross-compliance (Statutory Management Requirement 2 - Conservation of Wild Birds and Statutory Management Requirement 10 – Plant Protection Products (Pesticides)).

Where to find relevant legislation:

Wildlife Acts 1976, 2000 and 2010
www.irishstatutebook.ie

EU Birds Directive Derogations
http://www.npws.ie/legislationandconventions/irishlaw/eubirdsdirectivederogations/

SI No. 481 of 2010. Restrictions on Use of Poison Bait Regulations 2010
www.irishstatutebook.ie

Directive 98/8/EC of the European Parliament and of the Council of 16 February 1998 concerning the placing of biocidal products on the market as amended by Council Regulation 1882/2003/EC) and Commission Directives 2006/50/EC, 2006/140/EC and 2007/20/EC
http://eur-lex.europa.eu

S.I. No. 625 of 2001. European Communities (Authorization, Placing on the market, Use and Control of Biocidal Products) Regulations 2001
www.irishstatutebook.ie

S.I. No. 511 of 2008. Poisons Regulations 2008.
www.irishstatutebook.ie

Regulation (EU) No. 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products.
http://eur-lex.europa.eu

Animal Health and Welfare Act 2013
www.irishstatutebook.ie

Protocol for investigation of deaths of Birds of Prey and other wildlife

Veterinary Laboratory Service (Department of Agriculture, Fisheries and the Marine),
The State Laboratory (Dept. of Public Expenditure & Reform)
and
National Parks and Wildlife Service (Department of Culture, Heritage and the Gaeltacht)

May 2013

Further to a series of meetings between representatives of the Veterinary Laboratory Service of the Department of Agriculture, Fisheries and the Marine, the State Laboratory, and the National Parks and Wildlife Service (NPWS), the following protocol is agreed.

Scope:

This is a national scheme to monitor mortality in Irish birds of prey and other wildlife species with seven key aims:

1. Collection of evidence to support prosecutions for illegal poisoning.
2. Monitoring of the impact of poisoning on Irish raptor populations.
3. Monitoring the incidence of poisoning and impact of illegal poisoning on other vulnerable species (e.g. Raven)
4. Monitoring the incidence of poisoning in species vulnerable to secondary poisoning by rodenticides (in particular Barn Owl, Kestrel, Common Buzzard, Red Kite and Long-eared Owl).
5. Monitoring the impact of other types of persecution on Irish raptors and maintaining a database of such incidents.
6. Providing evidence of the causes of death of other wildlife species where poison is strongly suspected
7. Quantifying the use of specific poisons.

Scale of Work:

It is expected that the scale of the work is unlikely to exceed 50 specimens per annum The State Laboratory has the capacity to deal with 5 of these specimens as urgent and treat them accordingly. Cases will be deemed urgent by a designated Wildlife Inspector with National Parks & Wildlife Service. Any urgent cases in excess of this would be dealt with on a case by case basis but urgent processing of these could not be guaranteed due to the extra resources required.

Stakeholders:

Government Departments and Agencies:
Department of the Arts, Heritage and the Gaeltacht (National Parks and Wildlife Service)
Department of Agriculture (Veterinary Laboratory Service)
The State Laboratory
Environmental Protection Agency

NGOs:

Farm organisations
Golden Eagle Trust Ltd
BirdWatch Ireland
NARGC

1. **Publicising awareness of the scheme**

A national awareness campaign will be carried out, targeting NARGC Gun Clubs, Farming representative bodies, Raptor Study Group members, Bird Watch Ireland branches, Gardai, veterinary practices, wildlife rehabilitation centres, falconers and taxidermists, giving details of scheme, and contact details for members of the public finding carcasses of wild birds of prey.
Information will also be provided on the NPWS website.

2. **Day-to day operation of Scheme:**

Routine Submissions:

Specimens for testing (i.e. dead birds or faecal samples from suspected poisoned but living birds) will normally be submitted by NPWS rangers to Regional Veterinary Laboratories (RVLs), or by certain other nominated individuals only. Members of the public and NGOs are asked to contact NPWS in the first instance to arrange delivery of specimens to RVLs where possible. Protocols on collection, assessment, investigation and chain of evidence will be followed. [RVL may decide to accept specimens from other sources.]

In the following cases, specimens will be held for post-mortem and toxicology analysis in monthly batches to allow for cost-effectiveness:

- Any bird of prey or Raven, or other bird species where a number of specimens are involved, found dead in circumstances suggesting poisoning but where prosecution is not considered appropriate/possible [Note: where multiple birds/samples arise from the same event, they will share a common submission form, reference number etc.]
- Any barn owl, long-eared owl or kestrel
- Suspected bait items where poisoning is suspected but where a prosecution is not considered possible
- Suspected poisons or other chemicals recovered during an investigation or search
- Faecal samples from birds suspected to have been poisoned but still living (these samples should be taken at the very earliest stages of discovering the bird).

Urgent Submissions:

In the following cases, and where NPWS requests through Wildlife Inspector Dr. Barry O'Donoghue, post-mortem and toxicology analysis will be fast-tracked (subject to the note on capacity in the State laboratory under "Scale of Work" on p1):

- Any Golden Eagle, White-tailed Eagle or Red Kite
- Any other bird of prey found dead in circumstances suggesting poisoning and where a prosecution following investigation is considered possible

- Any bird species where a number of specimens are found dead suggesting poisoning and where a prosecution following investigation is considered possible
- Any suspected bait items where poisoning is suspected and a successful prosecution is considered likely

Sample Reception:

Cases will be booked in advance, by an NPWS conservation ranger, who will specify that this is a Raptor Poisoning case. The ranger & RVL will agree a suitable time to deliver it to the RVL. The NPWS Ranger will be given the name of a person to hand it to, who will complete the 'chain of custody' section of the submission form (see below).

RVL Addresses, directions, and contact times are attached in Appendix 1

On arrival at the RVL, the NPWS ranger will present

- carcass/suspect bait as defined in NPWS section of protocol
- specimen will be in a leak-proof container (e.g. Ziploc bag, plastic box), sealed and clearly labelled with species, site, contact number (ranger's mobile)
- completed submission form – this will show chain of custody, and this should be maintained in the RVL. This form (with copy retained in RVL is sent to the State Lab with the samples
- hard copy of x-rays (if digital X-Ray system has been used, a set of digital images e-mailed in advance to Research Officer on duty will substitute) [RVLs do not undertake x-rays. X-rays should be undertaken at designated veterinary practices]

Chain of custody:

Each person taking custody of the samples will complete the "chain of custody section' of the form and will take responsibility for securely handling, storing, testing or dispatching samples as required.

Post mortem examination, sampling and sample dispatch by the RVL:

Post Mortem Examination:

1. Keep a printed copy of the attached PM summary in the post mortem area where it can be referred to by the duty pathologist, and the most recent version of this protocol in the front office where it can be referred to by reception staff
2. Record details of each Raptor Protocol submission on LIMS as per submission form *(attached)* using the Raptor Protocol Workflow *(currently in development & testing)*
3. Weigh the bird, record the weight
4. Photograph the carcass before the PM, and photograph any significant lesions, ensuring that the case number and scale are visible in the photos
5. Record carcass condition in respect of fat, muscle, degree of crop fill
6. Record plumage condition, any evidence of chemical staining or burns
7. Perform full post mortem where carcass is intact and fresh, with bacteriology, virology, histology as judged appropriate by the duty pathologist, and keeping a contemporaneous record of as a hard copy. Perform a post mortem directed primarily at sampling where carcass is decomposed and or scavenged, recording reasons for this.
8. Test a sample of fresh kidney for lead content

Sampling:

Regardless of condition of carcass, sample as many as possible of the following into rigid screw-top containers or twist-seal sterile sampling bags:

- Crop contents
- Stomach contents
- Intestinal contents
- Cloacal contents
- Liver
- Kidney

- Skeletal Muscle
- Blood
- Samples of suspected poison

Create a separate aliquot for each sample collected above, store each aliquot in a sealed container (universal type, or larger).
Label each tube with sample ID and state which matrix it contains (e.g. blood, faeces)
The aim of sampling is to recover a sample for testing and a sample for archiving, so up to 10g/10ml of each of the above to be sampled if available.

Dispatch of samples to State Lab:

1. Notify State Lab contact point (Ed Malone and John McBride) in advance of the arrival of Raptor Protocol samples by email to edward.malone@statelab.ie and john.mcbride@statelab.ie, and only dispatch samples when it is confirmed that somebody will be available to receive them

2. Dispatch all samples to Ed Malone, State Laboratory, Backweston Laboratory Campus, Young's Cross, Celbridge, Co. Kildare by registered post, clearly marked as "Raptor Protocol Samples" by the end of the working day after receipt.

3. Include the original submission form, keeping a photocopy on file at the RVL

4. Inform State Lab of any specific reasons to suspect toxicity, and any circumstantial evidence seen at PM e.g. yellow staining of nitroxynil

5. Put all samples into individual sealed evidence bags, labelled and identified on the included form

Testing by the State Lab:

1. The State Lab proposes to carry out all testing by LC-MS/MS and using confirmatory criteria commonly applied in others areas of similar testing,

2. These tests will not be accredited by the State Lab but validation work will be carried out to determine the fitness for purpose of the tests. The tests will be deemed confirmatory and stand up to some scrutiny because mass spectrometry is used as the primary detection technique.

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3. Where a prosecution is in train, the State Lab will send reference samples to another laboratory in the UK for confirmatory testing if this is deemed necessary.

4. The State Lab currently tests for:

		Reporting Level (µg/kg)
a.	Strychnine	2000
b.	Nitroxynil	50
c.	Paraquat	5000
d.	Alpha Chloralose	500
e.	Carbofuran	50
f.	Methaldehyde	2500
g.	Warfarin	50
h.	Brodifacoum	1000
i.	Dicumarol	50
j.	Difenacoum	50
k.	Flocoumafen	500
l.	Flunixin	250

5. The State Lab will report results as
    a. Present at greater than the reporting level
    b. A response was noted at the retention time of “analyte” but is less than the reporting level.
    c. Not Detected
    d. Not tested

6. The number of matrices tested will depend on whether the sample is routine or urgent
    a. On urgent samples liver and crop contents will be tested, with other matrices examined only if SL believes that this may provide more information.
7. On routine samples, only crop contents and liver tissue will be tested routinely.

8. The State Lab will hold an archive of the tissues submitted. Tissues will be released for subsequent testing on
    a. A case-by-case basis, by agreement between representatives of the State Lab (I. Kinahan) Veterinary Lab Service (M. Casey) and NPWS (B. O'Donoghue)
    b. Or on the basis of a further protocol on sample sharing

Testing by the Agri-food Biosciences Institute, Northern Ireland:

Although not a party to this protocol, AFBI were consulted during its preparation and indicated that they may be in a position to support this scheme from time to time by:

- Botulism testing
- Confirmatory testing
- Testing urgent samples (which could be directed to State Lab/AFBI, depending on which one had a batch of routine samples 'ready to run')

Reporting arrangements

Routine cases:

A preliminary report will be issued by the receiving RVL within one week, giving PM findings and test results received to date. The State Lab will typically report toxicology results from routine cases in 28 days to the RVL

A final report on routine cases will typically issue from the RVL within one week of all tests being completed and results received at RVL

Urgent cases, where prosecution is likely:

Where sample has been flagged as urgent (by NPWS Wildlife Inspector Barry O'Donoghue), the preliminary findings of the PM will be issued by phone/email within two working days. Test results from the RVL on urgent cases will ordinarily be completed and reported within one week of the carcass's submission.

The State Lab will typically report toxicology results from urgent cases in 7 days to the RVL. A final report on urgent cases will typically issue within two working days of the last test result being received in the RVL

Publication of aggregated results:

3. Outputs

For all recording and reporting purposes, the RVLs shall send post mortem reports (preferably by email) to NPWS Wildlife Inspector Dr. Barry O'Donoghue and include in the same correspondence, NPWS staff member(s) relevant to the particular case. Correspondence should include a full post mortem report and a copy of the completed submission form (showing reference number, chain of custody etc.). Where cases are referred to the State laboratory, the results will be sent back to the RVL, with NPWS contact point Dr. Barry O'Donoghue included in the same correspondence.

NPWS staff seeking updates shall contact Dr. Barry O'Donoghue only.

The NPWS will provide an annual report of the poison use surveillance data, with mapping of incidents associated with specific poisons, published in first quarter of each year.

Copies of the report will be sent to the Minister for Agriculture, Fisheries and the Marine, the Minister for Arts, Heritage and the Gaeltacht, , the Pesticide Registration & Control Division (Pesticides Registration Authority), the EPA and interested NGOs.

Peer-reviewed scientific publication of the aggregated results of this testing shall be by agreement of representatives of the State Lab (I. Kinahan) Veterinary Lab Service (M. Casey) and NPWS (C. O'Keefe).

All three partner organisations will be able to use aggregated results in non-peer-reviewed publications e.g. annual reports, which can be published on official websites where agreed.

Enforcement of Legislation

Depending on the situation, follow-up investigation or enforcement will be carried out by the authority/authorities responsible for the relevant legislation.

Legislation that may be invoked includes

Legislation	**Responsible Authority**
The Wildlife Acts	NPWS, An Garda Síochána
SI No. 481 of 2010. Restrictions on Use of Poison Bait Regulations 2010	NPWS, An Garda Síochána
S.I. No. 625 of 2001. European Communities (Authorization, Placing on the market, Use and Control of Biocidal Products) Regulations 2001	
S.I. No. 511 of 2008. Poisons Regulations 2008.	

Review of Protocol

This protocol will be reviewed annually or as necessary, so that changes can be agreed if required ahead of the following calendar year, and a full uniform set of data acquired for the following using the revised Protocol.

_____	_____	_____
Mícheál Casey,	Barry O'Donoghue	Ita Kinahan
On behalf of RVLs	On behalf of NPWS	On behalf of State Lab.

Appendix 5: Campaign for Responsible Rodenticide Use

The demands of consumers for high quality and safe food means that there is an ever-increasing need for higher standards in all stages of the food chain. This has led to much stricter quality assurance requirements from buyers, such as supermarkets and food processing companies.

Among these requirements is the need for more effective control of pests, such as rodents, which contaminate and destroy food while still in farm stores. At the same time, there is a greater recognition of the need to protect and enhance wildlife in rural areas.

The Campaign for Responsible Rodenticide Use (CRRU) aims to protect wildlife while promoting and providing effective rodent control through the responsible use of rodenticides. In a bid to ensure that any negative impact on wildlife caused by poor pest control practice is eliminated, CRRU is actively promoting the responsible use of rodenticides and has launched a code under the banner 'Think Wildlife'. These essential guidelines promote best practice in rodent control.

From advising those using rodenticides to have a planned approach and always using enough baiting points, to warning them never to leave bait around at the end of treatment, the code will help rural users to get the best results from their rodent control programmes, yet reduce the potential harmful effects on wildlife.

To learn more on this initiative, launched in Ireland in September 2013, or how to minimise risk to wildlife, go to www.thinkwildlife.org

Appendix 6: RAPTOR 'do and don't' leaflet

HOW YOU CAN HELP THE R.A.P.T.O.R. PROTOCOL

The RAPTOR Protocol is a Government Initiative to address non-habitat related threats and pressures that face Ireland's birds of prey. If you find an injured or dead bird of prey, or encounter any suspicious activity, here are some tips to help:

DO

- Immediately contact NPWS (01-8883255 or RAPTOR@ahg.gov.ie). If NPWS not available, contact nearest Garda Station.
- Record the time and date. Record any correspondence with landowners/officials/others.
- Record details of the scene. Record the species and any relevant details (e.g. condition/age of bird/tags). Take photographs showing context of scene and a close up of bird/ring/tags/bait, etc.
- Record the exact location (e.g. Grid Reference, Google Maps screen shot or dropped pin) including specific directions to the scene (consider marking with a stick/plastic bag, etc. but not so obviously as to alert perpetrators)
- Follow instruction from NPWS/Gardai.
- In the case of injured/sick wildlife, check www.irishwildlifematters.ie for your nearest wildlife rehabilitator/vet.
- Look beyond the obvious – there could be other birds, bait, etc. beyond that which you have initially encountered.

DON'T

- Don't remove or interfere with what may be evidence of a wildlife crime, unless otherwise instructed by officials or appropriate.
- Don't handle birds or poisons (unless in specific circumstances with appropriate knowledge and protective gloves, etc.).
- Don't approach the landowner unless appropriate.
- Don't jump to conclusions. The authorities will investigate in the appropriate manner, with Post Mortem examinations and toxicology tests available if required.
- Don't deliver dead birds to RVL: Only Authorised Officers from NPWS or An Garda Siochána can send carcasses or bait samples for testing.
- Don't ignore anything suspicious (e.g. pigeons unable to fly, any type of meat, decoy birds, raptor feathers, pole traps, overheard conversations/anecdotal information).
- Don't ignore any dead, sick or injured bird of prey or multiple bird casualties.

Appendix 7: Central Contact Details of Stakeholders

Central Contact Details of Key Stakeholders	
Stakeholder	**Contact Details**
National Parks & Wildlife Service, Department of Culture, Heritage & the Gaeltacht	7. Ely Place, Dublin 2 +353 1 888 3255 www.npws.ie RAPTOR@chg.gov.ie
Regional Veterinary Laboratories Department of Agriculture, Food & Marine	Agriculture House, Kildare St. Dublin 2 +353 1 607 2000 www.agriculture.gov.ie info@agriculture.gov.ie
The State Laboratory Department of Public Expenditure & Reform	Backweston Laboratory Campus Celbridge Co. Kildare +353 1 5057000 www.statelab.ie info@statelab.ie