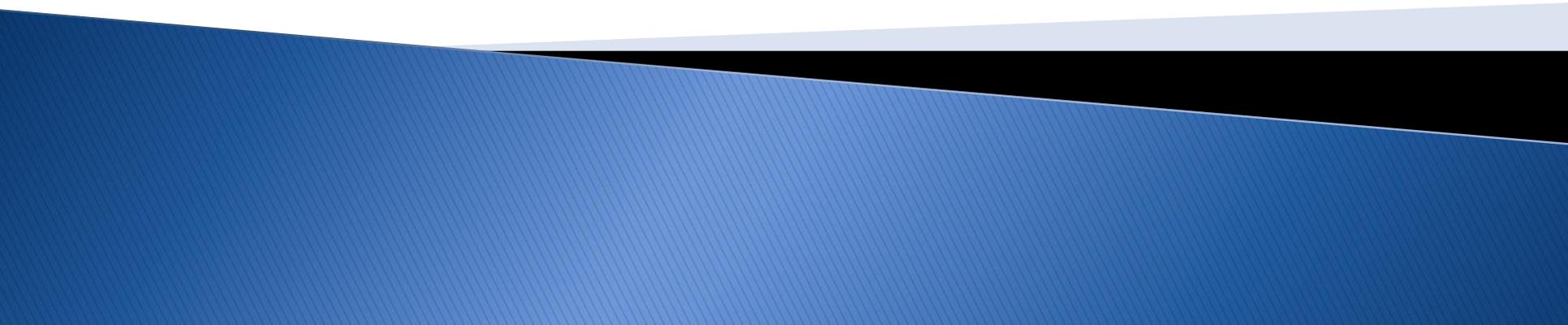


# Industry Symposium on Rodenticide Regulation & Training

Michael Loughlin



# PERMANENT BAITING

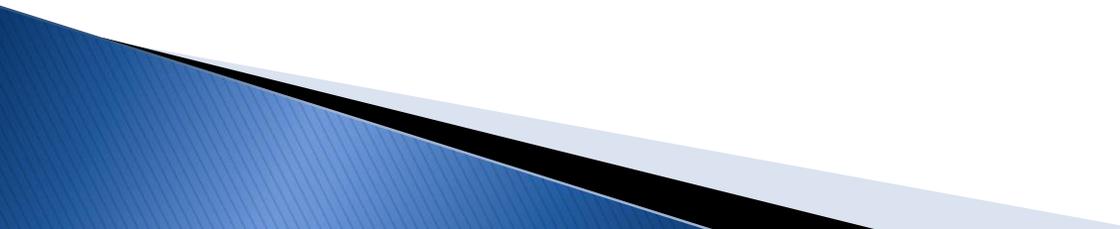


**A STANDARD PART OF RODENT  
PEST CONTROL CONTRACTS**

**BAIT BOXES OFFER LIMITED  
PROTECTION TO WILDLIFE**

**IS NOT SUSTAINABLE  
NEW RESTRICTIONS WILL APPLY**

# THE PROBLEM

- ▶ Widespread contamination of Non-target animals with rodenticide active substances
  - ▶ Primary and Secondary poisoning
  - ▶ Predatory birds and mammals
  - ▶ Scavenging birds and mammals
- 

# THE PROBLEM

## Contamination *via* multiple food chains

- Target rats and mice & non-target small mammals, taken by owls, Red Kite, Buzzard, Kestrel, and mammalian predators (Stoats, Pine Martens, Badgers & Foxes)
- Non-target slugs and snails, taken by small birds, that are then taken by Peregrine Falcons and Sparrowhawks and Mammals

# NON-TARGET RESEARCH

Netherlands 2014 – KAD

20 Bait stations in each of:

2 x residential blocks

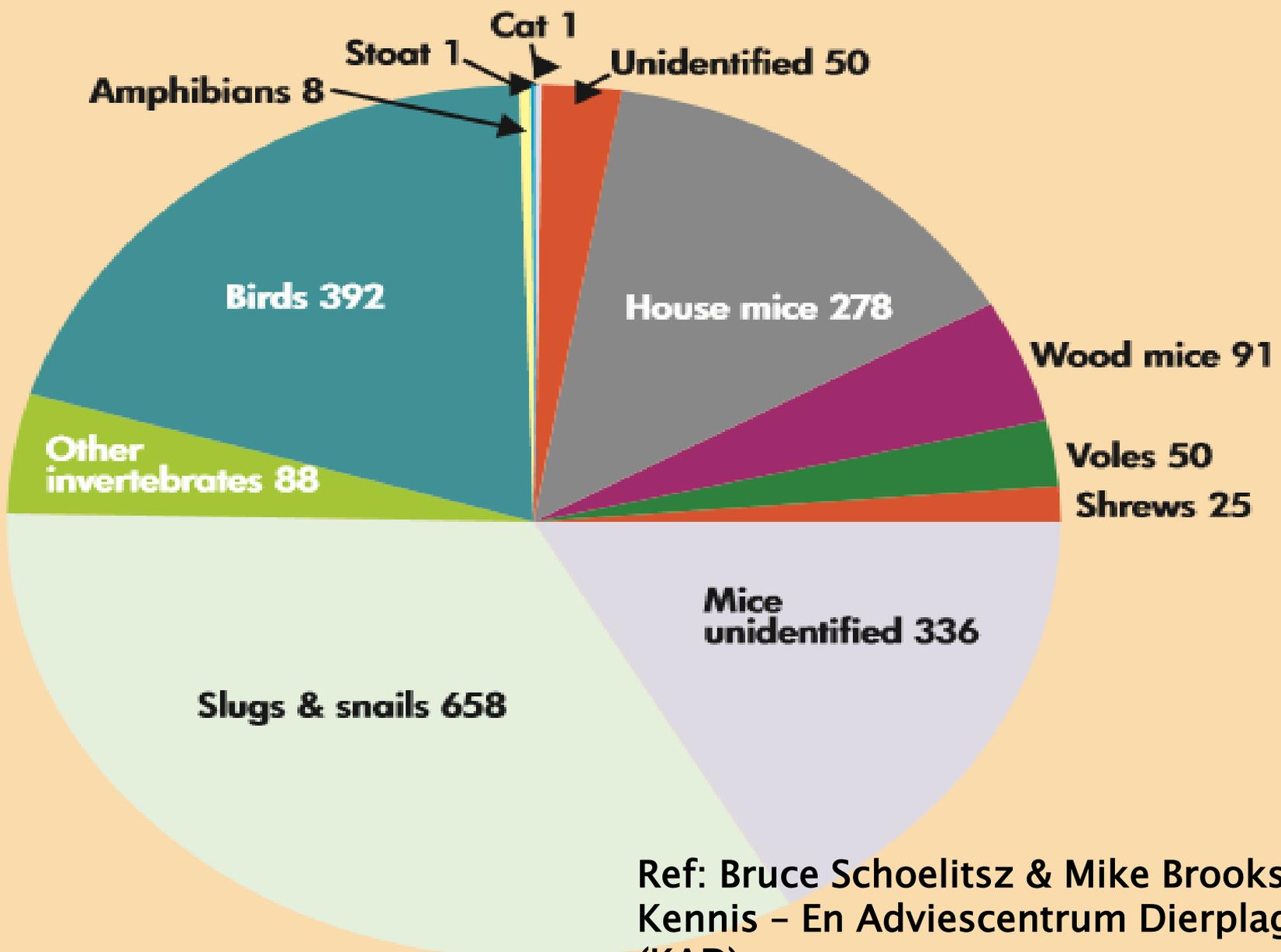
2 x business areas

2 x agricultural areas (PIG/DAIRY)

**IMAGING & TRACKING DEVICES**

**RECORDED ACTIVITY OVER 10 WEEKS**

# Species and numbers visiting the bait stations



Ref: Bruce Schoelitz & Mike Brooks  
Kennis - En Adviescentrum Dierplagen  
(KAD)



*Jackdaws feeding from a bait station during the study*

10 Bird species were identified visiting Stations including:

**ROBIN, DUNNOCK, MAGPIE, JACKDAW, GREAT TIT,  
MOORHEN, BLACKBIRD**





### Badger

**Broc** Length 85cm

Widespread, nocturnal mammal. Omnivorous, diet dominated by invertebrates, also fruits, berries, cereals, fungi, and will take carrion and can take small mammals and other live prey.

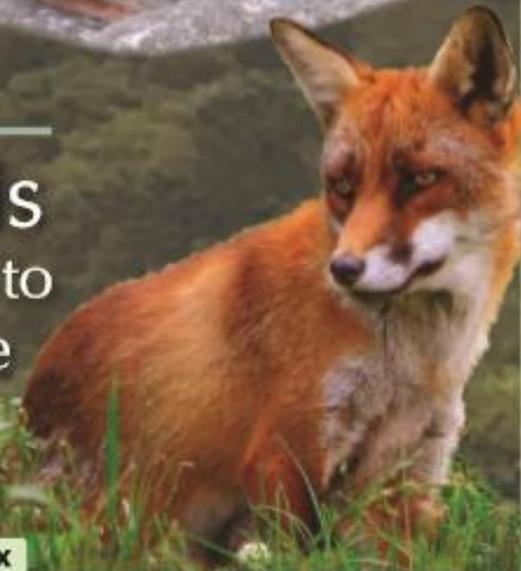
### Stoat

**Easóg** Length 30cm

Our smallest carnivore, native sub-species. Widespread, uses a range of farmland habitats and woodland. Diet includes rabbits, small mammals, birds, eggs, invertebrates, occasionally fruit and berries.



# Irish Mammals which are susceptible to rodenticide exposure



### Fox

**Madra rua** Length 100cm

Widespread and generally common in most habitats. Mostly nocturnal. Opportunistic and varied diet including small mammals. Research in Northern Ireland showed high proportion of individuals exposed to rodenticides.



### Hedgehog

**Grainneóg** Length 25cm

Widespread, but likely in decline. Nocturnal and hibernates in winter. Mostly insectivorous, but will take frogs, small mammals, birds and eggs.

### Bank Vole

**Luch rua** Length 15cm

Non-native, introduced to the south west in the 1920's. Now occurs throughout Munster, parts of the midlands and west, continuing to expand range. Preference for woodlands and hedgerows. Omnivorous. An important prey item for predators.



### Pygmy Shrew

**Luch féir** Length 9cm

Long-established and widespread in Ireland. Smallest Irish mammal. Insectivorous and will take a variety of invertebrate prey. Important prey item for many predators.



### Greater White-toothed Shrew

Length 12cm

Recently introduced to Ireland, main range is the south west but expanding. Insectivorous. An important prey item for many predators.



### Wood Mouse

**Luchóg fhéir** Length 16cm

Widespread and adaptable, found in most areas, prefers habitats with ground cover. Opportunistic feeder, will take both animal and plant foods. Important prey item for many predators.



### Pine Marten

**Cait crainn** Length 66cm

Pine Marten is native to Ireland. They are recovering from very low numbers in the 1970s, now widespread but elusive, generally inhabit forests. Diet includes berries, fruits, invertebrates, birds and small mammals.



**Design** M.O'Clery. **Text & concept** John Lusby. **Photo credits:** Background image, M.O'Clery; Badger, BadgerHero - Wikimedia Commons; Stoat, Dermot Breen; Hedgehog, 'Gibe' Wikimedia Commons; Fox, Malene Thyssen - Wikimedia Commons; Bank Vole, R.T.Mills; Pygmy Shrew, R.T.Mills; Greater White-toothed Shrew, John Murphy; Wood Mouse, David Perez Wikimedia; Pine Marten, Noel Marry.

# Barn Owl Food Cache – Tipperary



*Image: John Lusby  
Birdwatch Ireland*



# HOW DO WE KNOW RAPTORS ARE CONTAMINATED?

# The RAPTOR Protocol

## Carcass Collection

NPWS Rangers & Others



## Designated Veterinarian

X-Ray examination (shooting)



## Regional Veterinary Lab

Post-mortem examination



## State Laboratory

Chemical Analysis

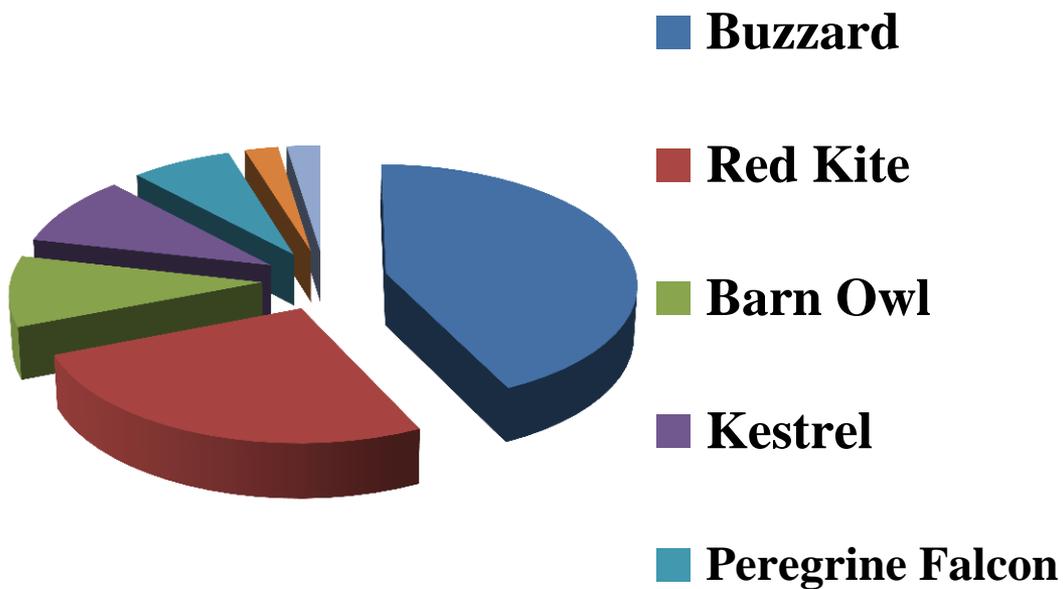
**Annual RAPTOR  
Report**

**Prepared by  
NPWS**

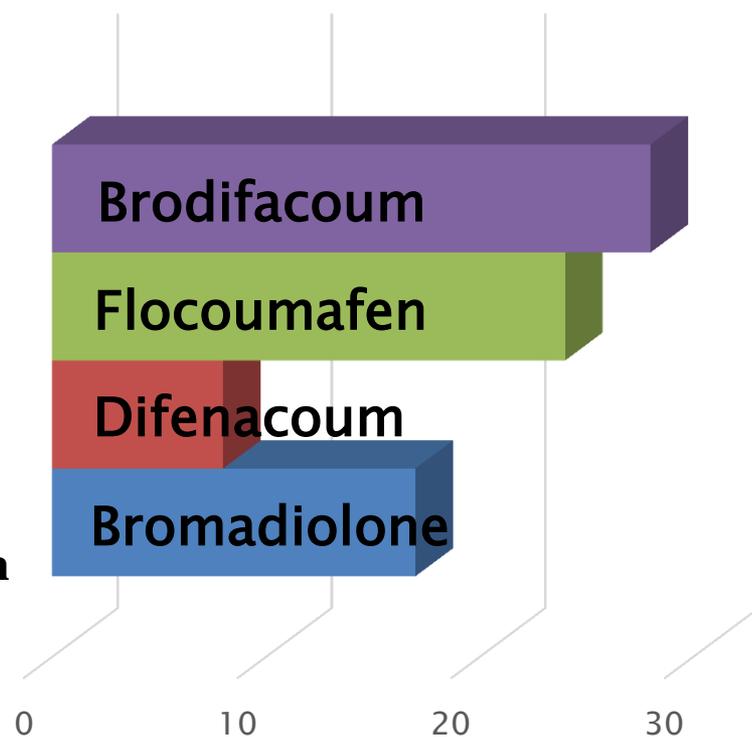


# The Irish Situation: Incidents 2007–2015 species & rodenticides involved

## NPWS Incidents 2007-2015



## Rodenticides Involved



These 42 incidents reflect poor rodenticide practice *i.e.*  
failure to abide by Best Practice

WHERE DO WE GO FROM HERE ?

# INTEGRATED APPROACH REQUIRED

**IPM** WILL REDUCE DEPENDENCE ON RODENTICIDE  
AND REDUCE WILDLIFE EXPOSURE

CONSIDER “ **THE RISK HIERARCHY**”



# IPM – INTEGRATED PEST MANAGEMENT & THE RISK HIERARCHY

- **HABITAT MODIFICATION**  
Make site unattractive to Rodents
- **BIOLOGICAL CONTROL**  
(domestic cat, dog if feasible)
- **PHYSICAL CONTROL**  
Exclusion/Proofing
- **MECHANICAL CONTROL**  
Trapping
- **CHEMICAL CONTROL** – Acute poison,  
1<sup>st</sup> generation anti-coagulant  
or 2<sup>nd</sup> generation anti-coagulant



# 1. ELIMINATE Restrict Food/Water

# 2. CLEAN UP



# 4. MONITOR Non-Toxic



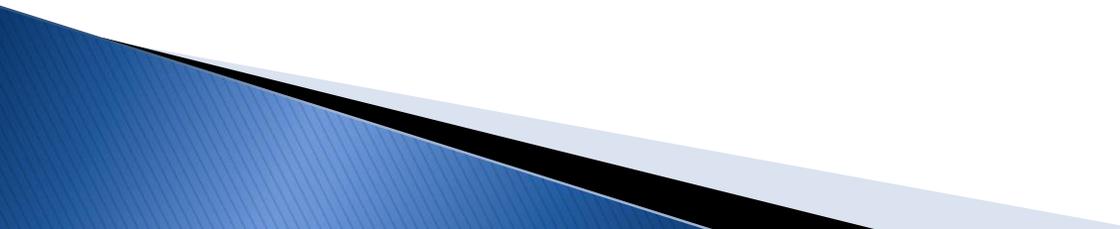
# 3. PROOF/Exclude



# Confirm Target Rodent Activity

- ▶ PRIOR TO USING RODENTICIDES OR LETHAL TRAPS TARGET RODENT ACTIVITY SHOULD BE CONFIRMED
  - ▶ CAN BE DIFFICULT !
  - ▶ IF INCORRECTLY ASSUMED THAT A TARGET RODENT HAS TAKEN NON-TOXIC BAIT SUBSTITUTING RODENTICIDE WOULD BE IRRESPONSIBLE
- 

# Confirm Target Rodent Activity

- ▶ TRAPPING NON-TARGETS IS NOT DESIRABLE BUT CAREFUL USE CAN:
  - ▶ MAKE CLEAR WHICH SPECIES AND NUMBERS ARE PRESENT AFTER NON-TOXIC BAIT TAKE
  - ▶ FACILITATE RAPID REVIEW / ADJUSTMENT
  - ▶ EFFECTS ARE LOCAL & POPULATION LOSSES ARE QUICKLY COMPENSATED
  - ▶ FACILITATES IMMEDIATE CARCASS REMOVAL
- 

# IPM – RESPONSIBILITIES

- Responsible rodent control not achievable without partnership approach
- Client responsibilities are critical and will minimise need for Rodenticide use
- Clients of PCOs are partners in IPM

# FUTURE USE OF PERMANENT BAITING

- Programmes involving Continuous Use of Toxic Bait  
May only be undertaken by Trained Professionals
- Only **difenacoum & bromadiolone** products

- Limited to sites with high potential for re-invasion

- Limited to sites where other methods of control proved insufficient and are documented

Revisit sites every 4 weeks (minimum)

**Review continually to justify this approach** – having regard to IPM & re-infestation assessment as parameters can change

**Follow any additional instructions provided by the CRRU code of best practice”.**

# RECORDS REQUIRED

- ▶ ASSESSMENT OF RISKS FOR WORKERS & BYSTANDERS
- ▶ ENVIRONMENTAL RISK ASSESSMENT FOR RODENTICIDE USE
- ▶ FULL RECORDS OF DEPLOYMENT OF RODENTICIDE OR TRAPS
- ▶ SITE SURVEY / MAPPING / PROOFING REQUIRED & COMPLETED / HARBOURAGE , FOOD, WATER REMOVAL / ACTIVE SUBSTANCES / BRAND NAMES / CARCASS REMOVAL / DATES & QUANTITIES APPLIED/REMOVED /TRAP CHECKS / REMOVAL

# RECORDS REQUIRED

## Rodent Pest Management Records

### Planning and Implementation

Revision 11.2, 1<sup>st</sup> November 2017



Available to download [www.crru.ie](http://www.crru.ie)



# CRRU IRELAND BEST PRACTICE REQUIREMENTS

Best Practice Requirements for Rodent Control  
and Safe Use of Rodenticides



Photo © Richard Mills

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