Conclusions and recommandations - Lead poisoning symposium & workshop

28 – 29 of September, Annecy, Haute-Savoie, France

SYMPOSIUM OBJECTIVES

- Present current knowledge and best practices on the issue of lead poisoning

WORKSHOP OBJECTIVES

- Develop recommendations for conservation actions against lead intoxication in the project area of the GypHelp project

CONCLUSIONS

– Global context

- ✓ Lead poisoning on wetlands and wetland species, and its effect on wildlife and public health, is well established – elicited regulation and legislation
- ✓ Lead poisoning can be significant threat to some terrestrial species as well
- ✓ Recent regulatory pressure – CMS COP11 declaration.
- ✓ Tendency in EU regulatory environment to limit and/or ban lead in products and food – matter of time before it also reaches hunting
- ✓ Lead bullets – high fragmentation. Scattered in muscle, viscera and bone!
- ✓ Hunting modalities in the Alps – favour consumption of lead by scavengers. Most viscera from shot animals have lead!

– Impact on vultures

- ✓ Direct toxic effect (acute & sub lethal – up to 50% sampled raptors) & chronic effect

- ✓ "Masked" impact through behavioural disorders (birds with sub lethal levels more likely to die of trauma) - tip of the iceberg?
- ✓ It can have population level impacts, also on vultures (e.g. California Condors)
- ✓ Bearded vulture – small sample sizes – prevalence of lead poisoning high in some areas. High individual susceptibility (due to diet and physiology). One of the main mortality factors in the Alps – e.g. Austria suspected population effect

– *Origins of lead*

- ✓ Origins of lead - evidence so far:

- Lead hunting ammunition – both from prey and from direct shooting events, main or one of the main sources.

- Locally and/or regionally, environmental sources (mining, industrial)

- Air pollution is not a factor

– *How and where to measure*

Method and materiel to measure lead content and lead origin

➔ Methods:

- ✓ Toxicological analyses to measure lead content
- ✓ Stable isotope analyses to identify the lead stable isotopic signature

➔ Materiel:

- ✓ Feathers (quill & new feathers better to reduce external contamination) – more difficult to use for stable isotope analysis, but one of the few non-invasive options.
- ✓ Faeces
- ✓ Blood – short half life
- ✓ Liver and kidney
- ✓ Bones - but bioaccumulation, age effect. Ideal for stable isotope analysis

– Non-lead ammunition

- ✓ Good performance (terminal ballistics); additional secondary added value – better meat, environment
- ✓ Technical information and own experience crucial for acceptance
- ✓ Price may be an issue
- ✓ Voluntary approach better than regulatory approach

RECOMMENDATIONS

- ✓ Based on scientific evidence
- ✓ Multidisciplinary approach (different analyses, lead origin by stable isotope identification, species population demography)
- ✓ Engagement and collaboration by all stakeholders. Hunting associations play an important role.
- ✓ Evolution of practice / regulation on disposal of hunting offals
- ✓ Game keeping with non-lead ammunition – first step in introducing a new paradigm?
- ✓ Voluntary testing by hunters for non-lead ammunition important step as well

FROM WORDS TO ACTION (France & LIFE GYPHELP)

- ✓ Independent evaluation ordered by FNC. The characterization of hunting methods would be very useful as well.
- ✓ LIFE GYPHELP: accompanied study by technical working group with small budget (10,000€) to better characterise incidence of lead poisoning in the project area, including its origins:

  - Risk assessment for the study area with <u>data from the field and from literature</u> (follow risk assessment methodology)

  - Lead stable isotope analysis of soil, ammunition, and bird materiel (bones, feathers and faeces) from the study area

- Enhance analysis of lead incidence on bearded vultures in cooperation with Stelvio National Park (lead content in liver or kidney + bones of lead poisoned birds in the study area and faeces analysis)

- ✓ LIFE GYPHELP: socio-economic evaluation on practice and attitudes of the hunting community (*conducted by the FDC 74*)
- ✓ LIFE GYPHELP: bearded vulture population demography study (to inform population level impacts)
- ✓ LIFE GYPHELP: develop new regulations for disposal of offal that are then shared and promoted
- ✓ FDC74: commitment to start voluntary testing of ammunition (performance, practicality)
- ✓ ONCFS: negociation with ONCFS in order to produce an action plan to introduce non-lead ammunition to gamekeeping operations (management and control of ungulates and-or pests)