

Minutes of the 21st Lead Ammunition Group meeting/teleconference 9th May 2017

11am-12.30pm

Attendees

Mr John Swift (JS)(Chair)
Prof. Rhys Green (RG) (RSPB)
Prof. Len Levy (LL) (Cranfield University)
Dr. Debbie Pain (DP)(WWT)

Secretariat

Dr Ruth Cromie (RC) (WWT)

1. Welcome and apologies

Apologies were received from Prof. Ian Newton (CEH) OBE FRS FRSE DPhil DSc, and Robert Hubrecht (UFAW) OBE BSc PhD FSB.

2. Minutes of the 20th meeting on 3rd November 2016

2.1 There were no comments made on the published minutes of the 20th meeting/teleconference.

2.2 Matters arising from those minutes:

Action point 20.1 LL to make further enquiries with FSA concerning FSA advice to consumers.

LL confirmed that there had been changes of personnel at FSA and he was not aware of additional work being undertaken on risks from lead in game meat. Similarly so at EFSA.

Action Point 20.2 Post letter from new Secretary of State on LAG website (in keeping with previous disclosure of all ministerial correspondence).

Completed.

Action point 20.3 JS to circulate terms of reference for discussion and posting on LAG website.

See Agenda item 3.2.

Action Point 20.4 RC to find date for next meeting in e.g. last week of February 2017.

Completed (availability issues had delayed the meeting).

3. To receive Chair's report

3.1 The Chair had produced a synthesis of recent science and policy developments on the risks and mitigation options for use of lead ammunition, which formed the basis of the substantive part of the meeting.

3.2 With this synthesis in mind, a discussion followed about the continuing role of LAG. It was agreed that LAG would continue to:

- a. Act as a clearing house for evidence pertaining to the use of lead and non-lead ammunition, effects on wildlife, health and environment and the effectiveness and practicality of methods for reducing the exposure of wildlife and humans to ammunition-derived lead;
 - b. Provide a forum for communications on such evidence, its quality and utility;
 - c. Post references to the sources of such evidence on the website to raise awareness of it;
 - d. Monitor both international and UK processes that call on such evidence, and facilitate access to this for interested parties¹;
 - e. Support expert contributions to such processes to help ensure that the evidence is properly taken into account and applied for the good of wildlife, health and the environment;
 - f. Provide relevant information to, and seek opinions from, interested experts with relevant backgrounds where appropriate;
 - g. Continue to keep Defra and FSA apprised of developments in this area, including by production of periodic updates as appropriate; and
 - h. Meet from time to time as agreed and convenient.
- 3.3 With respect to point g, as it was nearly two years since submission of the LAG report and there had been a number of significant science and policy developments since (including current ECHA work), an update for Defra and FSA was felt to be timely. Plans and timescales were discussed and agreed.

Action 21.1 LAG members to contribute to a LAG Update Report.

- 3.4 RG noted that many other countries had been interested in the LAG process and there was a role for similar stakeholder processes in those countries. LAG was seen as a means whereby good quality evidence on risks and mitigation could be collated and disseminated. The website should reflect how the process has worked and continues to work.

It was agreed that a list of interested parties could readily be compiled and their attention drawn to latest developments.

Action 21.2 RC to compile a list of those interested in lead ammunition and lead poisoning developments.

- 3.5 Current membership of the LAG was discussed including the need to update the website to reflect this. Currently, biographies are only given for members of the Primary Evidence Risk Assessment Sub-group.

Action 21.3 All members of LAG to provide a short biography for the LAG website (~150 words).

Action 21.4 RC to facilitate an update of the LAG membership area of the website.

- 3.6 JS felt, and others were in agreement, that expertise with lead ammunition and deer stalking was currently lacking from LAG and felt this should be addressed.

Action 21.5 JS to suggest an appropriate new member for LAG with suitable deer stalking experience.

3.7 Evidence

¹ Noting and reaffirming that LAG is not a lobbying group.

Mainly within the last 6-9 months, a wide range of publications and conference posters on risks and mitigation options for use of lead ammunition had been produced, of which some are reported here:

Human health

- a) LL had reported on work undertaken in Western Spain on lead and other toxic metals in hunted deer and boar. The authors concluded that regulatory approaches were required to address risks and a ban on lead bullets could protect consumers (Soler et al. 2016).
- b) RH had drawn LAG's attention to a paper by Dr. Peter Green MRCVS on health of free-living deer in deer parks including their exposure to lead. Although clinical lead toxicosis of deer was not reported it was noted that levels found in the liver would exceed otherwise permissible levels for human consumption (Green 2016).
- c) RG had provided to LAG updated information on the micro-CT study of particles and shards of lead ammunition within shot pheasants.
- d) Studies of lead loss from bullets in carcasses of moose shot in Fennoscandinavia led Stokke et al. (2017) to conclude that risks to human and wildlife health could be reduced by transition to copper bullets.
- e) Pineau et al. (2016) undertook experimental dosing of mallards with lead shot and concluded from the findings that game consumption should be limited given the accumulation of lead in organs such as the liver.
- f) In the USA, a review of risks of lead exposure in shooting ranges resulted in the authors (Laidlaw et al. 2017) suggesting that such ranges present a significant public health problem.

Wildlife health

- a) Using tracking technologies, researchers found that sub-lethal levels of lead in golden eagles in Sweden had effects on flight behaviour and increased the risk of mortality. The authors highlight that lead exposure, even at relatively low levels, is a considerably more serious threat to wildlife conservation than previously realised and suggest implementation of bans of lead ammunition for hunting (Ecke et al. 2017; also Madry et al. 2015 and Jenni et al. 2015 for impacts on golden eagles in the Swiss Alps).
- b) Lead poisoning from ammunition sources was reported in griffon vultures from the Iberian Peninsula and Israel (Carneiro et al. 2016, and Horowitz et al. 2014 respectively).
- c) Mateo et al. (2016) studied three sites in Bulgaria used by threatened red-breasted geese and found both low levels of environmental contamination with lead shot and no evidence of lead shot ingestion.
- d) In non-European areas, papers on impacts of lead ammunition in New and Old World vultures had been published (Wiemeyer et al. 2017 reported continental scale exposure for Andean condors, Naidoo et al. 2017 reported impacts on Southern African vultures).
- e) Golden et al. (2017) provided a review of effects of lead poisoning on scavengers in the USA.
- f) A 16 year retrospective study of veterinary toxicoses in domestic and wild animals in Canada found lead poisoning to be the most common (Cowan et al. 2016).

Domestic animal health

- a) Norwegian researchers had investigated risks to dogs being fed trimmings of game shot with lead and concluded that such meat from close to the wound canal should not be made available to domestic animals and wildlife if lead ammunition is to be used (Hogasen et al. 2016).

Environmental contamination

- a) There had been a number of publications on environmental contamination by lead ammunition of shooting ranges (Rodriguez-Seijo et al. 2017 for Spain, and Mathee et al. 2017 for South Africa).

Economics

- a) In relation to exposure to lead from contaminated water supplies in the USA, Meunnig (2016) provided the social and economic costs of inaction.
 - b) A paper exploring the economic impacts of lead poisoning from ammunition sources on conservation was currently in review.
- 3.8 A discussion followed agreeing that the LAG report conclusions remain robust, and more and more evidence is pointing to negative impacts of lead, moreover at lower concentrations than previously thought, with more technologies becoming available/being used to understand the risks.
- 3.9 All agreed that relevant evidence of suitable quality since submission of the LAG report should be made available on the LAG website.

Action 21.6 RC to facilitate posting of relevant publications on the LAG website categorised as appropriate.

3.10 Policy and other developments:

- a) REACH/European Chemicals Agency (ECHA): An Annex XV Restriction Dossier on the use of lead shot over wetlands was well underway.
- b) IUCN Resolution WCC-2016-Res-082: A path forward to address concerns over the use of lead ammunition in hunting. Noting that this supports the UN-Convention on Migratory Species Resolution 11.15 and goes further asking additional parties to focus on risks in wetlands and to raptors and scavengers. IUCN members would be in need of information on how to implement the Resolution and some had requested information already.
- c) UNEP-Convention on Migratory Species Preventing Poisoning Working Group: the Group had recently held a meeting in Toledo, Spain, at which significant progress was made on a Plan of Work on risks from lead ammunition and the development of the Group's Lead Task Force.
- d) European Federation of Associations for Hunting and Conservation: FACE remains focused on risks in wetlands.
- e) International Union of Game Biologists (IUGB): It was noted that a paper entitled 'Approaching a tipping point for transition to non-toxic ammunition' for the IUGB's forthcoming conference had been accepted for presentation.
- f) The US Fish and Wildlife Service's ban on use of lead ammunition on federal land has been overturned by the new Trump administration.
- g) In early November 2016, the Danish hunters had organised a non-toxic ammunition workshop as part of WWT's Flight of the Swans project. The one day workshop at the Thy National Park in Jutland involved local school children helping the hunters search for pellets in the gizzards of shot geese (non-toxic steel shot being found) and then helping prepare the goose meat as part of a large barbeque feast. A short [video](#) of some of the hunters' experience had been produced which highlights how experience of hunters in one country can be shared across flyways for the protection of shared migratory species such as Bewick's swans.
- h) Natural Resources Wales had called for evidence considering shooting on land it manages and it was likely that use of lead ammunition would be raised as an issue.

Scottish Natural Heritage (SNH). Forestry Commission Scotland (FCS), Forest Enterprise Scotland (FES) and Forest Enterprise England (FEE) continue to develop their positions on the use of lead and

non-lead ammunition. SNH issued a document in September 2016 about their position on ammunition for shooting deer. This states that SNH and FES are using copper bullets for controlling deer on public land whenever the species and calibre are appropriate. As a result, the majority of deer culled by these organisations are now killed using copper bullets. FEE have a position of using non-lead bullets for shooting deer on their estate in England where they are able. The Scottish Government has also indicated that shotgun cartridges purchased with public money for government-sanctioned goose control programmes in Scotland only contain non-lead shot.

- i) In previous correspondence to LAG, Defra had suggested that officials were looking at options for enforcing existing regulations better, in particular on SSSIs, and reducing the amount of lead shot in the countryside. It was not clear what progress had been made.

4 LAG website: to receive visitor data

Visits to the LAG website had continued at a relatively low but steady level.

5 Any other business

- 5.1 There had been a request to the LAG email regarding companies or individuals who specialised in clearing lead shot from shooting grounds. JS committed to asking his contacts about this.

Action 21.7 JS to ask contacts about details of specialists who clear lead shot from shooting grounds.

- 5.2 The question was raised about whether BASC or Countryside Alliance had published the findings of their questionnaire survey of game consumption. No-one was aware of any publication.

- 5.3 From the human health perspective LL will enquire, via contacts, of relevant work being undertaken in other Member States.

Action 21.8 LL to provide an update on LAG-relevant human health work being undertaken in other Member States.

6 Date of next meeting

Action 21.9 RC to find meeting date for early November (unless pressing matters require an earlier meeting).

Action points carried forward

Action 21.1 LAG members to contribute to a LAG Update Report.

Action 21.2 RC to compile a list of those interested in lead ammunition and lead poisoning developments.

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