

Minutes of the 22nd Lead Ammunition Group meeting 21st February 2018

9.30am – 12.30am
WWT Slimbridge

Attendees

Mr John Swift (JS) (Chair)
Prof Rhys Green (RG) (University of Cambridge)
Dr Robert Hubrecht (RH) (UFAW)
Mr Jeff Knott (JK) (RSPB)
Dr Debbie Pain (DP) (WWT)
Dr Ruth Cromie (RC) (WWT) (Secretariat)

1. Welcome and apologies

- 1.1 Apologies were received from Prof Ian Newton (CEH) OBE FRS FRSE, Prof Len Levy (University of Cranfield) OBE BSc MSc PhD FFOM FBTA, and Mr Simon Roch DSAS(Orth) BVM&S MRCVS (SR)
- 1.2 The Lead Ammunition Group welcomed RH to his first LAG meeting.

2. Confirmation of agenda

- 2.1 There were no comments made on the agenda.

3. Minutes of the 21st LAG meeting on 9th May 2017

- 3.1 There were no comments made on the published minutes of the 21st Lead Ammunition Group meeting/teleconference.
- 3.2 Matters arising from those minutes:

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

Nearly completed. See Agenda Item 5.

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

See Agenda Item 5.12.

Action Point 21.3 All members of LAG to provide a short biography for the LAG website (~200 words).

Nearly completed (JK to send updated version).

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

Completed.

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

Completed. Simon Roch has joined the LAG but unfortunately could not attend the meeting due to other commitments.

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

Completed.

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

Completed. JS provided feedback to the individual enquiring about clearing lead shot from shooting grounds. DP noted that the use of clearing lead shot had not been included as a mitigation strategy in the LAG Updated Report (see Agenda Item 5). All agreed that this would not be necessary for the time being unless there were further developments in this area.

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

Outstanding (apologies received from LL as he could not attend the meeting).

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

Completed (meeting was delayed due to availability issues).

4. Receive Chair's report

- 4.1 The Chair (JS) noted that June 2018 marks three years since the submission of the 2015 LAG Report, *Lead Ammunition, Wildlife and Human Health*, to the Secretary of State for Environment, Food and Rural Affairs plus other Defra and FSA officials. Members recognised the new and emerging evidence on risks and risk mitigation, as well as numerous subsequent policy initiatives. It was agreed there was a need to revisit the 2015 LAG Report's conclusions set out in the Executive Summary and review in light of the above, in the form of a LAG Update Report, recognising that risks from the use of lead ammunition remain a largely unresolved issue (see Agenda Item 5). The Chair thanked DP for undertaking to initiate this task.
- 4.2 The updated Terms of Reference agreed upon in the 21st meeting/teleconference were revisited. It was decided that no amendments were necessary. These were updated on the LAG website.
- 4.3 It was agreed that the newly updated membership section of the website better reflected the LAG's role as a multidisciplinary expert group rather than representing a stakeholder process.

5. Review new evidence in relation to LAG report conclusions and consider implications for the conclusions submitted to Ministers in 2015

- 5.1 JS highlighted the purpose of the LAG Update Report in providing an evidence base for reviewing the conclusions of the 2015 LAG Report, and the scope and scale of continuing risks. He noted that, although lead ammunition and the replacement of lead continue to be discussed at a range of environmental agreement conferences and meetings, there has been no indication of improvement in relation to human health or food safety.
- 5.2 JS expressed his gratitude to DP for undertaking the extensive review of new evidence since the submission of the 2015 LAG Report and the production of the substantive first draft of the LAG Update Report. JS noted the review draws attention to the likelihood that issues concerning wildlife and human health may be greater than previous evidence had shown. There is no evidence that significantly contradicts the wildlife and human health risks set out in the LAG Report 2015.
- 5.3 A discussion followed about the methodology used by DP to gather and review the evidence published since the 2015 LAG Report. DP clarified that the methodology involved:
 - a) A comprehensive exploration of primary literature on Web of Science, using a range of search terms relevant to the topics of lead ammunition and its impacts on wildlife, human health, and the environment.
 - b) Additional searches of primary literature on Google and Google Scholar.

- c) The addition of relevant grey literature, such as conference proceedings, brought to the attention of DP.
- 5.4 With this methodology in mind, various considerations relating to references cited in the LAG Update Report were discussed.
- a) DP noted that a small number of papers were difficult to access and requested that LAG members notify her in the event of gaining access to any of these.
- Action Point 22.1** LAG members to check access to missing primary scientific literature and forward to DP for inclusion in LAG Updated Report.
- b) To ensure the LAG Update Report was a comprehensive review, it was noted that the literature cited should be checked against those in the current European Chemicals Agency (ECHA) restriction proposal (for lead shot in wetlands) and those uploaded in the Resource section on the LAG website.
- Action Point 22.2** RC to check references in the LAG Update Report against the ECHA report and those on the LAG website.
- c) RG enquired as to how proceedings from the LAG Primary Evidence and Risk Assessment Subgroup (PERASG) are cited in the LAG Update Report. DP clarified that PERASG 2015 was cited when referring to the consensus conclusions, while references to the Risk Assessment were cited as Pain and Green 2015.
- 5.5 DP provided an oral update highlighting new areas of research and key evidence published since the 2015 LAG Report was produced.
- a) There has been an increase in the number of publications, mainly from continental Europe, investigating the impact of lead ammunition on raptors and scavenging species.
- b) Blood lead reference values considered by the Centers for Disease Control (CDC) have been lowered to 5ug/dL in adults, and are likely to be reduced to 3.5ug/dL in children. RG enquired as to whether action is required in the event that blood lead levels should surpass these thresholds. DP explained that action plans were put in place to reduce blood lead levels should this occur.
- c) New evidence suggests embedded lead can lead to higher blood lead levels than previously thought, causing sub-lethal and lethal effects in humans and wildlife. DP highlighted that much of the evidence focussed on the effect of embedded lead ammunition in humans, and noted the impact in humans is likely to be mirrored in other animal species. A discussion noted previous research on wildfowl indicating that ingested ammunition was still likely to result in higher blood lead levels.
- d) With respect to the publication highlighting poisoning of captive cheetahs in South African captive facilities, there followed a discussion about the ingestion of embedded lead in shot game being fed to captive carnivores. RC noted that lead poisoning can be problematic in falconry birds consuming such foods. JS raised concerns relayed to him by a contact at Chester Zoo regarding the need for great care sourcing meat for their captive carnivores, particularly given the conservation value of many animals in their collection. JK proposed guidelines might be suggested, potentially by the British and Irish Association of Zoos and Aquariums (BIAZA), to prevent captive animals being fed game contaminated with lead ammunition.
- Action Point 22.3** RC to contact BIAZA regarding guidance to game meat and captive carnivores.
- 5.6 JS stated, and other LAG members agreed, that further work was needed without delay to finalise the LAG Update Report. A discussion followed regarding its structure and it was agreed that it should be structured around the conclusions drawn from the 2015 LAG Report, with a brief summary at the end of each section. These summaries would highlight how new evidence published in the LAG Update Report builds on, modifies, or potentially contradicts previous research presented in the 2015 LAG Report.
- Action Point 22.4** DP to restructure LAG Update Report to refer back to conclusions drawn from the 2015 LAG Report, and add summaries for each section highlighting how new evidence relates to previous work published in 2015 LAG Report.

5.7 The production of an Executive Summary of the LAG Update Report was then discussed and an appropriate timescale was agreed, as follows:

Action Point 22.5 DP to produce the first redraft of the Executive Summary of the LAG Updated Report before the 8th March 2018, to be circulated for comment to other members.

Action Point 22.6 LAG members to provide comments and feedback on the LAG Update Report and Executive Summary before the 4th April 2018.

5.8 The ownership of the LAG Update Report and Executive Summary was discussed. It was agreed that, following all Members having had the chance to consider and comment on the draft report and agree its content, the report would be LAG property and become a LAG report for which all Members are jointly responsible.

Action Point 22.7 Once LAG Update Report is complete, JS to confirm full LAG membership agreement and support.

5.9 A discussion followed regarding the subsequent distribution of the LAG Update Report and Executive Summary. It was agreed that the Executive Summary should be made publically available and published on the website, while the full LAG Update Report would be restricted to distribution on a discretionary basis for the time being so as not to preclude publication possibilities, i.e. the reason for temporary restriction is that the review material is being separately written up for publication in peer reviewed scientific literature.

Action Point 22.8 RC to facilitate upload of the Executive Summary onto LAG website when agreed.

5.10 It was agreed that the LAG Update Report should first be sent on a restricted circulation basis to main statutory bodies (e.g. Defra, FSA, ECHA) before sharing with other organisations.

Action Point 22.9 On completion, JS to provide LAG Update Report to Defra and FSA, and DP to send copy to ECHA.

Action Point 22.10 LAG members to determine point of contact with FSA to send LAG Updated Report.

5.11 JS raised the question of making further enquires to the FSA about general advice provided to consumers given lack of evidence of awareness or uptake of advice.

5.12 JS suggested compiling a list of individuals interested in receiving developments about lead poisoning. General Data Protection Regulation was raised as a consideration and the LAG members agreed further deliberation was needed.

5.13 JS referred to a paper that is soon to be published on line by the publication *Ambio* (Royal Swedish Academy of Sciences): [Kanstrup, Swift, Stroud and Lewis \(2018\). Hunting with lead ammunition is not sustainable: European perspectives.](#)

6. Review Ministers' responses and decide next steps

6.1 No comments were made on the Ministers' responses.

6.2 RC suggested the LAG Update Report be used as the basis of a short science-policy update publication.

6.3 JS suggested, and others agreed, that LAG members should consult with Richard Benwell as to next steps.

Action Point 22.11 LAG members to liaise with Richard Benwell to discuss next steps.

7. Discuss other developments and processes

7.1 UN-Convention on Migratory Species (CMS)

a) RC provided an update on the Twelfth Session of the Conference of the Parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS COP12), held in Manila in

October 2017. Of note was the Deputy Executive Director of the United Nations Environment Programme, Ibrahim Thiaw, expressly highlighting the problems caused by lead ammunition to ecosystems and humans in his opening address.

- b) RC confirmed there had been a consolidation of previous poisoning resolutions (including the 2014 Resolution 11.15 with its appended [Guidelines](#)). The new Resolution ([UNEP-CMS 11.15 \(Rev COP12\)](#)) contains the same commitments to phase out lead ammunition.
- c) Additionally, the CMS Lead Task Group was formally established and the short film concerning the use of lead ammunition and the value of the Group was shown. RC reported that the Lead Task Group, which represents a stakeholder forum involving hunters and industry, now needs to be developed further.
- d) There had been both good awareness and engagement with the issue of lead poisoning from senior CMS secretariat and Contracting Parties including the European Commission, specifically at the [CMS Leaders' Breakfast](#) which had the theme of 'Moving towards a pollution-free planet'.

7.2 Third Meeting of the UN Environment Assembly (UNEA)

- a) RC drew attention to the UNEA3 meeting in Nairobi in December 2017, which focused on pollution. Lead ammunition was highlighted within a resolution on Environment and Health originally submitted by the EU ([UNEP/EA.3/L.8](#)).
- b) Given concerns about plastic pollution, the question was raised about biodegradable wadding when using steel shot. Biodegradable alternatives are in development and JS commented that this would be hastened when demand for steel shot with biodegradable wads increased. A discussion followed and it was agreed that this issue should be discussed further with other non-toxic ammunition experts.

Action Point 22.12 DP to contact Vernon Thomas about developments in biodegradable wadding.

7.3 [European Chemicals Agency \(ECHA\) – restriction proposal for use and possession of lead shot in wetlands](#)

- a) Accompanying AEWA as experts, RC noted her imminent attendance of the next Risk Assessment Committee (RAC) meeting; JS also reported his attendance of the Socio-Economic Assessment Committee (SEAC) meeting shortly afterwards. It was noted that a FACE representative would now also be attending both meetings.
- b) It was noted that the ECHA restriction proposal had been very thorough at highlighting the range of risks posed by lead ammunition. In terms of economics, it was not straightforward to quantify the benefits of reduced poisoning and soil contamination vs. the cost of changing to non-lead ammunition, accepting that the latter should be minimal as most countries have already moved to non-toxic ammunition in wetlands. The public consultation had prompted a large number of responses from conservationists and hunters alike, with strong resistance from industry and those hunters which have not yet undertaken their commitments under AEWA.
- c) A discussion followed about ECHA using the Ramsar definition of wetlands for the purpose of their lead restriction, which some hunters expressed concerns about and which remains a source of contention.
- d) Noting the difficulties in quantifying benefits of non-poisoned birds etc., RC enquired of the Group whether other means of economically measuring the benefits brought about by the restriction proposal were available. A discussion followed regarding the use of opportunity costing for sites designated for waterbirds, appreciating there are EU objectives for healthy waterbird populations and it might be possible to construct an economical value per bird. It was also noted that Ducks Unlimited Canada had some data on costs for producing ducks in the wild, and Prof Andrew Balmford of Cambridge University maintained a database of costs of running protected areas.

7.4 UK bodies (Forest Enterprise)

- a) JS noted that Members had received a response from SR regarding Forest Enterprise's experiences with use of non-lead rifle ammunition used for deer control.

- b) JS has been asked by SNH to present the conclusions of the 2015 LAG Report at a deer management round table hosted in May 2018. JS suggested, and others agreed, that he could also show the LAG Update Report Executive Summary.
- c) RG enquired as to whether SNH had provided a position statement on the use of lead shot for goose management, as they have a position concerning lead ammunition use for deer.

Action Point 22.13 JK to enquire about the position of the SNH on lead in species other than deer.

- d) It was noted that DP is giving a talk to Forest Enterprise Environment Conference in Exeter in April 2018.
- e) With respect to the National Trust, DP and RC had met with a representative and were aware that Regional Directors had already raised the issue of use of lead ammunition on NT managed land.

8. LAG website update and visitor data

- 8.1 The LAG website was updated to reflect changes to LAG membership, terms of reference, etc. The new information section (under Resources) was extensively revised to allow access to relevant primary literature published since the 2015 LAG Report, categorised as appropriate.

Action Point 22.14 All LAG members to check LAG membership page and inform RC of any further updates required.

Action Point 22.15 JK to provide a short biography for LAG membership page.

- 8.2 A discussion followed about the presence of LAG on social media, specifically Twitter. It was agreed that for the time being a specific LAG account is not necessary, although individual members may share LAG updates via social media if they so wish.
- 8.3 Visitor data suggests most traffic to the LAG website originates from the UK and USA. RG expressed his surprise, and DP agreed, about the relative absence of traffic from continental Europe.

9. Any other business

- 9.1 DP felt, and others were in agreement, that current expertise on LAG was unbalanced in favour of wildlife, with Prof Len Levy representing human health aspects. It was agreed that further representation of expertise on human health was appropriate.

Action Point 22.16 JS to discuss with LL and consider possibilities for inviting other human health experts about potential LAG membership.

10. Date of next meeting

- 10.1 It was agreed that next annual LAG meeting/teleconference should be held in early 2019.

Action Point 22.17 RC to organise meeting in October 2018 for the coming year (unless pressing matters require an earlier date).

- 10.2 JK suggested, and others were in agreement, that a meeting/teleconference should be held before the next annual LAG meeting to discuss how the LAG Updated Report is to be utilised.

Action Point 22.18 LAG members to organise meeting/teleconference to discuss how the LAG Updated Report is used once finalised.

Action points carried forward

From the 21st LAG meeting/teleconference (9th May 2017)

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

From the 22nd LAG meeting/teleconference (21st February 2018)

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