Bans on Traditional Ammunition: European Research and Actions

Fast Facts

Many countries in Europe have enacted partial restrictions or full bans on traditional ammunition with lead components over the past three decades.

The Netherlands have banned traditional ammunition since 1993. Denmark's ban has been in place since 1996. The Flemish region of Belgium has banned the use of traditional ammunition for hunting and sport shooting. Other countries in the European Union including: Austria, Cyprus, Czech Republic, Germany, Hungary, Italy, Spain, Finland, France, Latvia, Portugal, Sweden, and United Kingdom, have banned lead shot either on wetlands or for waterfowl hunting.

Norway had banned the use of lead shot for all hunting in 2005. However, in February 2015 the Norwegian Parliament voted to remove the ban on hunting outside of wetlands and shooting ranges.[1] This victory of science over fiction was due to the efforts of the Norwegian Hunters Association to point out the inaccuracies in the arguments of the group of veterinarians who had campaigned for the ban.

Policy Drivers

Despite the lack of sound science showing that traditional ammunition has an impact on wildlife populations, there are several drivers of these bans in Europe.

REACH is the European Union regulation aimed at protecting human health and the environment from chemical risks. The regulations, which came into force in 2007 and are being phased-in over 11 years, are designed to replace "substances of very high concern" (SVHC) with alternatives. Under REACH, there is a process established for an applicant to obtain authorization to use one of these substances. The regulations provide two routes to getting authorization: "adequate control" requires demonstrating the risks are adequately controlled and "socio-economic" requires proving the socio-economic benefits outweigh the risk and that there are no suitable alternatives.

Metallic lead is not currently included in the REACH regulations' candidate list as a substance meeting criteria as SVHC. At the current time, REACH does not restrict the use of lead in ammunition. However, it is under consideration with both Sweden and Denmark proposing its inclusion on the candidate list, additional risk management measures to address lead exposure via drinking water and food. While its inclusion may be years away, the first step in the process will be harmonized classification and labeling rules.

Classification, Labelling and Packaging (CLP) regulations apply to substances and mixtures, but not to articles. Lead compounds but NOT lead metal already have an obligatory harmonized classification. Metallic lead is expected to be classified in 2016 as hazardous by the European Chemicals Agency after the Committee for Risk Assessment (RAC) issued an opinion in 2013 designating lead metal as a "potent reproductive toxicant." There was not sufficient support among the member countries to include metallic lead in the last round of regulations, but a proposal for harmonized EU classification will move forward in 2016 with possible entry into force in late 2017. As ammunition is considered an article, it will not be directly affected, but the major implication will be the inclusion of lead metal in the REACH candidate list. Due to this inclusion, most uses of lead metal will in the future require REACH authorization, but the regulations will be phased in through the mid-2020s.

Other policy drivers include the United Nation's Convention on the Conservation of Migratory Species of Wild Animals (CMS). CMS, also known as the Bonn Convention, is an environmental treaty under the United Nations Environmental Programme (UNEP), with 120 State parties. The US, as well as Canada, China, and Russia are among the countries that are not party to the treaty. In November 2014, the CMS 11th Conference of Parties adopted a resolution that included a recommendation for countries to "phase-out the use of lead ammunition across all habitats (wetland and terrestrial) with non-toxic alternatives within the next three years…"[2]

Several countries enacted their restrictions in response to the African-Eurasian Waterfowl

Agreement's (AEWA) recommendation for using alternative shot over wetlands.[3] AEWA is a treaty on the coordinated conservation of migratory waterbirds and their habitats across Africa, Europe, the Middle East, Central Asia, Greenland and the Canadian Archipelago. There are 65 parties to the treaty.

Research

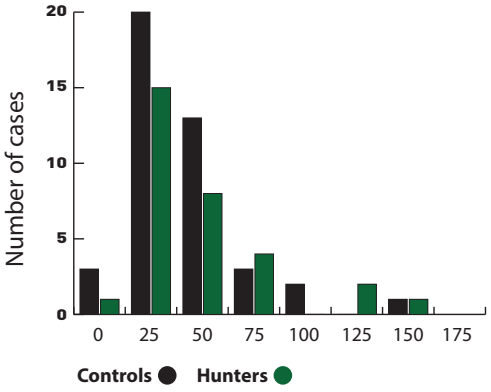
Researchers Carolyn Meyer, Joseph Meyer, Alex Francisco, Jennifer Holder and Frederik Verdonck have performed population trend modelling of European upland birds to evaluate the effect of lead shot ingestion.[4] Their study, which is pending publication in the peer-reviewed journal PLOS ONE, examined three susceptible upland bird populations in Europe using pathology reports that diagnose the cause of death and population models. Under a reasonable worst-case scenario, the findings of the studies of the grey partridge, common buzzard and red kite demonstrate that there is no significant impact on population levels.

In the case of the grey partridge, the research shows lead shot ingestion to be the direct cause of death in 4 percent of the cases, and the ultimate cause (based on elevated subclinical lead levels even if the bird died of another direct cause), in 7 percent of the cases. The common buzzard results found an insignificant percentage deaths caused directly by lead shot ingestion, and up to 5 percent of the cases conservatively listed lead as the ultimate cause. The red kite figures were slightly higher, with 9 percent of the deaths directly caused by lead shot ingestion and 16 percent indirectly.

Based on these conservative estimates of the impact of tradition ammunition on the species, the authors used published population models to quantify the population-level impacts. In the case of the grey partridge, the study found a 10 percent reduction in the steady-state population size, well below the 25 percent reduction accepted by wildlife managers. The common buzzard saw a reduction of less than 1 percent in the steady-state population size. The population size for the red kite is actually growing in all scenarios: with or without the use of traditional ammunition.

Other recent European studies focus on the lack of danger to human health from consuming game taken with traditional ammunition. In order to be absorbed by the human body, lead must be in ionic form as a water-soluble lead compound.[5] Even if there are very small fragments of solid lead metal in game meat, the lead is not in ionic form. Only a small percentage of any lead metal is converted to a bioaccessible lead compound within the body. One study, "Lead in Game Meat" found that on average only 1-2 percent of lead metal fragment present in the gastrointestinal tract is converted to a bioaccessible lead compound. This exposure percentage represents only about 9.4 percent of the European Food Safety Authority (EFSA) recommended exposure for adults.[6]

Another study examined blood lead levels in hunters, hunters' family members and general blood donors. The authors found that there were not a significant number of cases of hunters with elevated blood lead levels compared to the control groups and that in general, the blood concentrations of lead in moderate consumers of game meat are not different from individuals in the general population.[7]



These studies overwhelmingly confirm that the science does not support a ban on traditional ammunition. The long-standing use of traditional ammunition does not pose a threat to wildlife populations or to human health.

1 King, Lucy, "Updated: Norwegian parliament votes to repeal lead shot ban," ShootingUK.com Jan. 30, 2015. http://www.shootinguk.co.uk/news/lead_shot_ban_vote_norway-42462

2 Resolution 11.15, "Preventing Poisoning of Migratory Birds" adopting the "Guidelines to Prevent the Risk of Poisoning to Migratory Birds" Annex 2 to document UNEP/CMS/COP11/Doc.23.1.2.

3 Avery, Dominique and Richard T. Watson, "Regulation of Lead-Based Ammunition Around the World," The Peregrine Fund, July 25, 2008. https://www.peregrinefund.org/subsites/conference-lead/PDF/0115%20Avery.pdf

4 Meyer CB, Meyer JS, Francisco AB, Holder J, Verdonck F., "Can ingestion of lead shot and poisons change population trends of three European upland birds: grey partridge, common buzzard and red kite?" Publication in revision in Plos One.

5 EFSA panel on contaminants in the food chain (CONTAM); 2010 Scientific opinion on lead in food. EFSA J. 8(4), 1570.

6 EFSA 2010, Table 37 Conversion of B-Pb levels to dietary exposures at the BMDLs.

7 Haldimann, Max, Andreas Baumgartner and Bernhard Zimmerli, "Intake of lead from game meat – a risk to consumers' health?" Eur Food Res Technol (2002) 215:375–379.

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