A significant International Symposium was organized in Brussels on 20 October 2015 by the Association of European Manufacturers of Sporting Ammunition (AFEMS) and the World Forum on Shooting Activities (WFSA).

The Symposium focused on the sustainable use of lead in ammunition and its impact on both the environment and human health. The Symposium also provided an overview of the ballistic features of both lead and non-lead ammunition and assessed the current legislation at the European and International level.

Background information

Lead is present naturally in a variety of forms, but only metallic lead is used in sport shooting and hunting ammunition.

The use of lead metal is highly sustainable because it can be recycled an infinite number of times and the available technologies make the process economically advantageous. It has been used in the ammunition industry for centuries because it possesses excellent ballistic features and is highly cost effective. No other material can guarantee the same results in terms of performance and sustainability.

The use of lead in ammunition is already highly regulated and its proper management minimizes the possible negative impacts on environment and health. Several scientific studies and research papers show that metallic lead in ammunition has no significant impact on human health and the environment as compared to other forms of lead. For example, lead fragments in game meat, if ingested, cannot be directly absorbed by the human body because they are in metallic form. By comparison, food consumed in larger quantities and by the general population, such as cereals, dairy products, vegetables and tap water, have the greatest impact on human dietary exposure to lead. Moreover lead shot and projectiles used in both indoor and outdoor shooting ranges are regularly collected and recycled.

Restrictions in the use of lead in ammunition would inevitably damage both hunting, a necessary prerequisite in game management as well as a traditional cultural practice, and sport shooting, a highly disciplined activity which increasingly involves young people and women.

The Symposium

The symposium was attended by 110 delegates, including journalists, politicians, scientists, members of environmental institutions, hunting and sport shooting organizations and food agencies.

Three influential keynotes speakers from the European Parliament and the European Commission described the current position and future strategies of the European regulatory bodies, thus giving further significance to the event.
Sixteen speakers covered every conceivable aspect of lead in civilian ammunition, with presentations organized into five different panels: environment, legal issues, ballistics, human health and other issues. Three expert journalists managed the lively and animated debates which followed the presentations as well as sharing their own assessment of the issues.

The Symposium opened with a welcome address from Mr Torbjörn Lindskog (AFEMS President) who welcomed participants and introduced the first keynote speaker, Ms Natalie Pauwels (DG ENVI), who presented the EU Environment Policy priorities over the coming years. The afternoon session was opened by Mr Herbert Keusgen (WFSA President) followed by a keynote address from Ms Renata Briano (Vice President of the EU Parliamentary Intergroup “Biodiversity, Hunting and Countryside”).

Panel 1: Environment (Speakers: Patterson – Verdonck – Göttlein; Moderator: James Crisp)
Mr Rick Patterson (SAAMI Executive Director) spoke about the California Condor whose blood lead levels and population number did not change despite the introduction in 2008 of a ban on lead hunting ammunition and 99% compliance with the ban.
Mr Frederik Verdonck (ARCHE Consultant) presented the results of experiments which were carried out to demonstrate the magnitude of the effects of lead shot ingestion on population size, growth, and extinction of upland avian species that ingest these substances. The results suggested that lead shot can cause poisoning of individual birds but they have no significant impact on population level.
Mr Axel Gottlein (Professor for Forest Nutrition and Water Resources at the Technische Universität of München) presented the results of a comparative assessment of the environmental impacts of different types of bullets.

Panel 2: Legal Issues (Speakers: Dufwa – Binks – Silvis)
Mr Bill Dufwa (Professor Emeritus at the Stockholm and Uppsala Universities) talked about the legal aspects which need to be taken into consideration when alternative types of ammunition are used in weapons which were not originally designed for use with that ammunition.
Mr Steve Binks (Director of the REACH Lead Consortium) gave a brief overview of the legislative framework in Europe with regards to lead in ammunition.
Mr Mauro Silvis (Executive Secretary of WFSA) explained how the issue of lead in ammunition is being addressed in the international arena, and in particular at the United Nations level.

Panel 3: Ballistics (Speakers: Bronson – Kinsky – Pfannenstiel; Moderator: Knut Brevik)
Mr Ryan Bronson (Director of Conservation and Public Policy at VISTA Outdoor) compared the performance of both lead and copper bullets for big game hunting.
Mr Helmut Kinsky (former CEO of DEVA) also spoke about the performance difference between lead and lead-free bullets with regards to their rebounding effect.
Mr Hans-Dieter Pfannenstiel (Professor Emeritus, Zoology) further examined this issue by reporting on an existing German study involving different calibres and bullets used for hunting.
Panel 4: Human Health (Speakers: Baasch – Holmgren – Mannucci – Von Stetten; Moderator: Frederic Simon)

In his presentation, Mr Klaus-Hinnerk Baasch (Doctor, Toxicology) explained that, despite several concerns about human health and wildlife, lead contained in ammunition has no relevance to consumer protection, species protection or the environment.

Mr Christer Holmgren (Senior Advisor at SEPA) presented the methodology and results of his recent study, ‘Lead in Game Meat’, which showed that only 1-2% of present lead metal fragments are converted to bioaccessible forms in the human gastrointestinal tract.

Mr Pier Mannucci Mannucci (Scientific Director at the Policlinico Hospital Foundation of Milan) reviewed the case-control study of the Swiss Public Health Office, showing that there is no risk of a significant increase in the body burden of lead for the average consumer of wild game hunted using lead ammunition. A similar case control study is now being conducted in Italy.

Mr Holger Von Stetten (Doctor, Internal Medicine) stressed once again that banning lead hunting ammunition does not reduce the lead pollution of the total population. Human dietary exposure to lead among consumers occurs largely through the most commonly eaten foods and only in a very small part through game.

Panel 5: Other Issues (Speakers: Larsen - Rosi – Streitberger)

Mr Rolf Larsen (Director of the Norwegian Hunting Association) spoke about the efforts made to repeal the ban on lead ammunition in Norway and the activities undertaken to achieve this.

Mr Stefano Rosi (Director of the Italian Shooting Federation) described how lead is collected in shooting ranges in Italy for recycling.

Similarly, Mr Joachim Streitberger (Director of the Shooting Ranges Association) presented case studies to demonstrate the efforts made in Germany to operate shooting ranges in an environmentally friendly manner.

For any further information, please contact the secretariat at leadsymposium@afems.org