



SECOND SESSION OF THE MEETING OF THE PARTIES TO THE AGREEMENT ON THE
CONSERVATION OF AFRICAN-EURASIAN MIGRATORY WATERBIRDS (AEWA)
GERMANY, 25-27 SEPTEMBER 2002

BACKGROUND DOCUMENT TO RESOLUTION 2.2 ON PHASING OUT LEAD SHOT FOR HUNTING IN WETLANDS

1. INTRODUCTION

Lead poisoning in waterbirds through the ingestion of spent lead shot is a serious environmental problem. Large-scale die-offs of waterbirds drew the attention to the issue already in the 1950s and 1960s, but it took several decades until the issue was first internationally addressed. Even today, the issue is still far from being widely acknowledged.

Cartridges for hunting waterfowl each contain around 30 grams of lead. A hunter fires an average of 3-6 cartridges for every bagged bird. Only a few pellets actually hit the bird; the rest fall to the ground or into the water. Thus, thousands of tonnes of lead are annually deposited in wetlands around the world. In France, for example, the annual deposition is estimated to be as high as 6250 tonnes per year, and in Spain, in protected natural habitats alone, it is around 5000 tonnes per year.

Waterbirds deliberately pick the pellets up from the bottom and swallow them, mistaking them for food items or grit, which is retained in the gizzard to facilitate the grinding of the food. Lead is a highly poisonous metal, causing severe anemia and affecting the nervous and circulatory systems, liver and kidneys. Birds that ingest ten or more lead pellets will die of acute lead poisoning within a few days. If a smaller number (two to ten) is ingested, birds will gradually start to show signs of chronic lead poisoning, such as drooping wings, green and watery faeces, weight loss and atypical behavior. This influences their ability to forage and to escape from predators. These victims usually die within two to three weeks. If a bird swallows only one pellet, it usually survives, although its immune system and fertility are likely to be affected. Also, even low concentrations of lead have a negative impact on energy storage, which affects the ability to prepare for migration.

Lead poisoning through the ingestion of spent lead shot is estimated to kill many millions of waterbirds worldwide each year. Already in the 1950s, scientists in North America estimated the yearly number of victims in their continent alone to be 1.5 to 4 million. Recent surveys in Europe and North America showed that as many as 40% of all waterbirds ingest at least one lead pellet during a single season of exposure. In addition, secondary lead poisoning can occur when predators or scavengers consume affected waterbirds. Research conducted in various countries (e.g. USA, Germany, Austria, France) during the past five to ten years showed that secondary poisoning, particularly of Bald Eagles (*Haliaeetus leucocephalus*) and White-tailed Eagles (*Haliaeetus albicilla*), is a significant source of mortality. In Europe, for example, it is responsible for ca. 25% of post-fledging mortality in White-tailed Eagles. Lead poisoning in waterbirds can also form a considerable health risk to humans. On average, 15% of all waterbirds have lead levels in their flesh well above the generally accepted health norm for human consumption.

For more background information please visit the AEWA Website:

<http://www.unep-wcmc.org/AEWA/eng/leadpage1.htm>

(Reference: *Lead Poisoning in Waterbirds. International Update Report 2000*)

2. ACTIONS UNDER AEWA

Action Plan

The AEWA Action Plan, appended as Annex 3 to the Agreement Text, contains a paragraph specifically addressing the issue of lead poisoning in waterbirds:

Paragraph 4.1.4

Parties shall endeavour to phase out the use of lead shot for hunting in wetlands by the year 2000

Conservation Guidelines

The AEWA Conservation Guidelines, adopted in Resolution 1.10 at the First Meeting of the Parties, acknowledge the seriousness of the issue and urge the Range States to switch to non-toxic alternatives:

Guidelines No. 2: Identifying and tackling emergency situations for migratory waterbirds

Lead poisoning in waterbirds, resulting from the ingestion of spent lead shot, is not generally believed to cause emergency situations, and often remains unnoticed. It is a common mortality factor in Europe and North America. Millions of waterbirds died annually in the USA before the use of lead shot was banned. Raising public awareness is an important issue, as in many countries lead poisoning is not recognized as a problem, and the environmental dangers have yet to be acknowledged.

Guidelines No. 5: Sustainable harvest of migratory waterbirds

Spent lead shot from hunting cartridges is toxic, and has been highlighted as a key problem for waterbirds. The use of steel, tungsten or bismuth instead of lead can address the problem of poisoning. These alternatives are already widely available and in use. Lead poisoning is an unacceptable waste of the waterbird resource, and in recognition of this, the Agreement encourages Parties to phase out the use of lead shot for hunting in wetlands by the year 2000

In the light of the above, Resolution 1.14, and Project C11 of the International Implementation Priorities 2004, both adopted at the First Meeting of the Parties, *request the Technical Committee to review the experiences of those countries that have phased out, or are endeavoring to phase out, the use of lead shot for hunting in wetlands, in consultation with hunting organizations, gun and ammunition manufacturers and traders, and accordingly bring elaborate guidance to the Meeting of the Parties at the present session.*

This resulted in a review that was carried out by Wetlands International with financial support from the AEWA Secretariat and the UK Joint Nature Conservation Committee. It was published in July 2001, titled *Lead Poisoning in Waterbirds. International Update Report 2000*. This report, which is based on a literature review and on questionnaires returned by 74 nations and 11 organizations, was sent to delegates of all Contracting Parties, other contributors, and interested individuals and parties. In addition, it can be downloaded at http://www.wetlands.org/pubs&/Lead_P_Report.htm. The main conclusions and recommendations of the report are:

- Presently, only six AEWA Range States (Canada, Norway, Finland, Denmark, The Netherlands and Switzerland, the last four being Contracting Parties) plus the USA have phased out the use of lead shot in wetlands. In other words, the majority of Range States, including the remaining twenty-six Contracting Parties, have not yet complied with Paragraph 4.1.4, although five Contracting Parties are well on the way. Phasing out lead shot appears to entail certain difficulties, which impede a smooth transition to non-toxic shot. Examples of such factors are lack of awareness, lack of communication with the hunting community, low availability of non-toxic shot, lack of finances/logistics to enforce legislation and to train and educate hunters, and the fact that the issue is not on a country's priority list for political/economical reasons.
- In order to deal with the largely insufficient awareness of the issue, both among hunters and among authorities, the Agreement Secretariat is requested, in accordance with the outcomes of the report mentioned above, to
 - Raise awareness of the issue by publishing low-key information materials;
 - Stimulate communication between hunters and conservation organisations/ authorities/ammunition manufacturers by setting up contact networks across the Range, and by continuing to organize workshops similar to the one mentioned above, notably in developing countries and countries with economies in transition;

- Stimulate communication between hunters' organisations across the Range in order to set up an information/expertise network;
 - Communicate to authorities the need to phase out lead shot, the need for gun proofing and testing facilities and the need for awareness raising campaigns, and consequently
 - Assist in fund raising activities to finance the above.
- Governments of Contracting Parties are encouraged to engage actively in the implementation of Paragraph 4.1.4 of the Action Plan at the national level. In addition they are responsible for the communication between authorities and conservation organisations on one side, and the hunting community on the other side.
 - Law enforcement is an important factor in phasing out the use of lead shot. Range States are requested allocate finances and logistics to this end.
 - International hunting federations are requested to allocate funds to the establishment of training and gun proofing facilities, and to the distribution of the available information materials at the national level.
 - Time, finances and logistics available for research should preferably not be allocated to more detailed research concerning the exact degree and background of the toxicity of ingested lead pellets. Rather, research should be focused on determining the incidence of lead poisoning in those countries where the scale of the problem is unknown. Awareness of the scale of the problem can, in turn, lead to constructive developments.
 - In line with the data presented in the report, conservation NGO's and the Agreement Secretariat are advised to carry out additional research in order to determine more precisely which factors seem to be most important in tackling the lead poisoning issue. Such research could be used to inform governments on the relative importance, and order, of measures to be taken.
 - The implementation of a lead shot ban should be accompanied by the enhancement of the availability of non-toxic shot. Authorities should make an effort to stimulate and facilitate its production. This could be done by encouraging and supporting lead shot manufacturers when they switch to producing non-toxic shot, both financially (through tax relief or other subsidies) and logistically (e.g. through the establishment of co-operation with countries which have experience in this field).
 - Manufacturers of alternative shot - and preferably also other businesses - in well-developed (e.g. OECD) countries are encouraged to invest in the steel shot industry in developing countries and other countries which are financially unable to do so themselves. Once more widely accepted, it is expected that the increasing demand for alternative shot will give this industry high potential.

It appears that measures need to be taken simultaneously at the level of authorities, ammunition manufacturers and hunters' organisations: one step cannot be made without the other. The question of co-ordinating this therefore requires planning and good communication. The most parsimonious line of action is therefore that the AEWA Secretariat will be asked to acquire access to funds necessary to accomplish both the practical and organisational aspects of solving the issue at the international level, and that the Range States are requested to allocate finances and logistics towards the facilitation of lead shot ban implementation at the national level. Training, education and awareness raising at the national level should preferably be co-ordinated by the international hunting federations. The combined action should be monitored and regularly reviewed by the Technical Committee.

3. NON-TOXIC SHOT WORKSHOP

In October 2001, an international Non-Toxic Shot Workshop was held in Bucharest, Romania. Its intention was to bring the lead poisoning issue to the attention of delegates of Eastern European Range States, and to supply them with information and experiences necessary to implement a change to alternative ammunition in

their countries. The workshop was organized by the AEWA Secretariat and the Federation of Hunting Associations and Conservation of the European Union.

The theoretical session of this workshop comprised several lectures. Firstly, the Lead Poisoning Review mentioned above was presented by a representative of Wetlands International.

Secondly, a representative of the gun manufacturing business outlined the efforts of this industry to accommodate new developments. He indicated that it does not take any considerable adaptation for an ammunition manufacturer to switch to the production of alternative shot. Also, he stated that alternative shot is well suitable for the vast majority (i.e. all modern) guns, and that its performance is of equally satisfactory as that of lead shot.

Furthermore, a shot and ballistics expert addressed the audience and explained the practical differences between lead shot and alternative ammunition. His conclusion was that alternative shot, notably steel shot, is a high-quality alternative. Although slightly more expensive than lead and less widely available, its performance is highly satisfactory and causes no serious impediment to safety or to the life of a gun. The slight inconveniences that may arise (e.g. having to get used to different ammunition, decreasing the shooting distance, obeying stricter safety rules) do in no way outweigh the serious need of a ban on lead shot. This was followed by three case studies, namely the experiences of France, Denmark and the United Kingdom throughout the process of phasing out lead shot in their countries. France noted considerable logistical problems due to a lack of communication between the hunting community and the government. The UK is well on the way to implement a ban without notable difficulties. In Denmark a ban was fully implemented in 1996. Denmark showed a remarkable example of a well-functioning communication between the interested parties, and the step-wise process of the implementation should serve as an example to other countries.

The French experience also included an extensive overview of large-scale research into the physiological and behavioral effects of lead shot ingestion on birds. This research outlined the high toxicity of this metal and its long-term persistence.

Main conclusions of this part of the workshop were:

- Lead poisoning is a serious issue which should be, and can be, addressed.
- However, a ban should be implemented gradually, and should be combined with measures like the enhancement of non-toxic shot availability, information and education for hunters, and the training and gun proofing possibilities.

The second day of the workshop comprised a practical demonstration session at a shooting range near Bucharest. Members of a local shooting club demonstrated the effectiveness of steel ammunition during clay pigeon shooting. Afterwards, all delegates had a chance to try the ammunition themselves. Finally, a series of tests was carried out to compare the effectiveness of lead and alternative ammunition. Because of the small scale of this set-up, statistically sound conclusions were not drawn, but the results indicated that regular steel cartridges performed nearly equally well as lead cartridges, while 'High Performance' cartridges proved fully comparable. Even though it was clear that many hunters still considered lead to be the ideal ammunition, it was remarkable to see that interest on the issue had been raised and that the performance of steel cartridges was judged to be surprisingly good.

References:

- Proceedings of the Non-Toxic Shot Workshop held in Bucharest, Romania, in October 2001.
- Beintema, N.H. 2001. *Lead Poisoning in Waterbirds. International Update Report 2000*. Wetlands International, Wageningen, The Netherlands (http://www.wetlands.org/pubs&/Lead_P_Report.htm)