



## **OBSERVATIONS\_3**

**by FITASC and ISSF/ESC,**

**Internationally recognized shooting sport organizations**

**on**

**ANNEX XV RESTRICTION REPORT**

**ECHA PROPOSAL FOR A RESTRICTION**

**released on 24<sup>th</sup> March 2021**

***on use #3 – clay target shooting sport***

**September 24<sup>th</sup>, 2021**



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## 1. Significant risk of closure for clay target sport shooting facilities

In the document sent to ECHA in July 2020 (see chapter 5)<sup>1</sup>, FITASC and ISSF provided all the scientific elements demonstrating that, on sport shooting facilities, the risk of chemical mobility of lead can easily be controlled by a good management of the soil pH, as long as lead shot is not mixed with other types of metals. They also provided all the scientific evidence showing in particular that the deposition of steel shot on lead shot generates serious risks of soil pollution.

Therefore, in case the EU would decide to ban lead shot, it would pose on all sporting facilities that currently use lead shot the burden to collect the lead AND clean up the soil BEFORE allowing the use of steel shot cartridges. For clay target shooting alone, 2600 shooting clubs in the EU (excluding Denmark, Belgium, Sweden and the Netherlands)<sup>2</sup> would be affected by this new constraint.

These 2600 shooting clubs have never been alerted that they could be compelled to finance the collection of lead and the cleaning of their soils. They do not have the funds to bear this cost.

A possible ban on lead shot would make these clubs even more unable to clean their soils since it would deprive them of the main funding to do so: recycling.

Lead shot can be recycled in a closed loop system (to produce new lead shot) and only in a closed loop system (it cannot be recycled for other uses). Banning it means having it lose all its market value.

Today, one ton of lead shot collected is "worth" more or less 800 €. By collecting between 80 and 150 tons of lead, a shooting club can generate between 64K€ and 120K€ which can be used for the self-financing (partially or totally depending on the case) of the collection company's work.

If tomorrow, this ton of lead shot is no longer "worth" anything, shooting clubs will have to bear the entire cost of recovery and cleaning. A cost that, based on the self-financing principle explained above, would represent between 166 M€ and 312 M€ for the 2600 clubs concerned.

They simply cannot afford it and a large part of them will be forced to close.

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<sup>1</sup> Fitasc contribution dated July 17th, 2020:  
[https://www.fitasc.com/upload/images/echa\\_mai\\_2021/20200720\\_eng\\_fitasc\\_doc\\_contribution\\_echa.pdf](https://www.fitasc.com/upload/images/echa_mai_2021/20200720_eng_fitasc_doc_contribution_echa.pdf)

<sup>2</sup> Fitasc contribution dated July 17th, 2020 – Chap 2.3 page 13



## 2. Economic impact of the potential closure of clay target sport shooting facilities on the industry

The socio-economic study of ESFAM/IEACS (“*Response to consultation on the restriction report for lead and its compounds*” submitted to ECHA last 5<sup>th</sup> July 2021) provided detailed information on the socio-economic impact of the proposed restriction on the firearms manufacturing and hunting sectors, considering only guns and ammunition, including sporting ones.

Yet, the industry also sells target throwers and clay targets, primarily to clay target shooting clubs. If many of them were to close for the reasons mentioned in point A, the industry's turnover would be directly impacted.

To measure this impact, the following figures, which are not included in the study above-mentioned, are to be considered:

### 2.1 Clay Targets

455 million clay targets used for shooting sports are sold every year in Europe, including the UK<sup>3</sup>. These targets are produced by small and medium sized European companies. Considering an average selling price of 50€/1000 targets, the clay target market represents:

	Volume of clay targets sold per year	Turnover of clay targets sold per year
EU 27-2020 countries	291 millions	14,5 millions euros
EEA countries	301 millions	15 millions euros
<b>EEA countries + UK</b>	451 millions	<b>22,5 millions euros</b>

### 2.2 Target throwers

Approximately 5,500 clay target throwers used in shooting sports are sold every year in Europe, including the United Kingdom (*sources: target thrower producers*), produced by small and medium-sized European companies. This volume of sales represents an annual turnover of about **13 million euros** (considering the average price of a machine at 2500€).

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<sup>3</sup> see addendum produced on May 4th, 2021 by FITASC/ISSF:  
[https://www.fitasc.com/upload/images/echa\\_mai\\_2021/20210504\\_addendum\\_may21\\_to\\_fitasc\\_contribution\\_july20.pdf](https://www.fitasc.com/upload/images/echa_mai_2021/20210504_addendum_may21_to_fitasc_contribution_july20.pdf)



### 3. Comments on the water solubility value used in the Annex XV restriction report

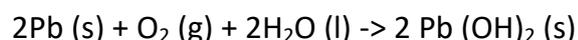
FITASC/ISSF fully support the contribution of Slovakia Member State (SK REACH & CLP CA) submitted on 22<sup>nd</sup> July 2021 through the public consultation. We quote hereafter the last paragraph of their contribution:

*“The water solubility of the substance is an important parameter for hazard and risk assessment considering the human health as well as ecotoxicological endpoints, e.g. the bioavailability of the substance etc. The water solubility value of 185 mg / L at 20°C (without reporting a pH value) used in Annex XV report given in the Table 1-2 indicates that the substance is soluble in water. According to ECHA Scientific report for evaluation of limit values for lead and its compounds at the workplace, (October 2019), the water solubility of solid lead is 3.2 mg/L (pH 6, 24 h) 185 mg/L (pH 11). We consider it important to complete the data on water solubility of lead in the Annex XV report.”*

FITASC/ISSF share the consideration that it is important to complete the data on water solubility of lead in the Annex XV report.

The water solubility of the substance is an important parameter for hazard and risk assessment considering the human health as well as ecotoxicological endpoints, e.g. the bioavailability of the substance etc. The water solubility value of 185 mg / L at 20°C (without reporting a pH value) used in Annex XV report given in the Table 1-2 indicates that the substance is soluble in water.

Under normal conditions, lead does not react with water. However, when lead comes in contact with moist air, reactivity with water increases. A thin layer of lead oxide (PbO) forms on the surface of the metal. When both water and oxygen are present, metallic lead is converted to lead hydroxide (Pb (OH)<sub>2</sub>):

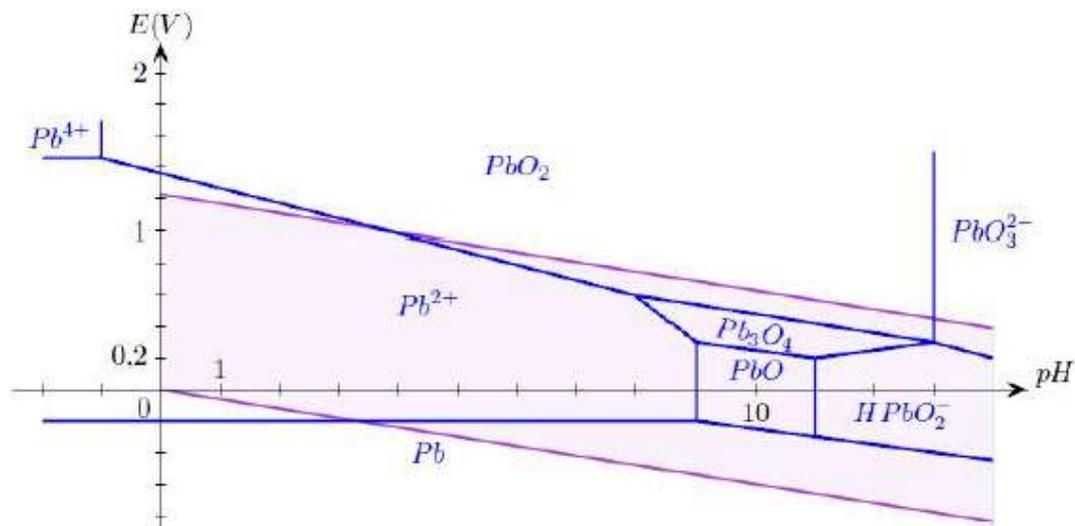


Where s means solid, l = liquid and g for gas

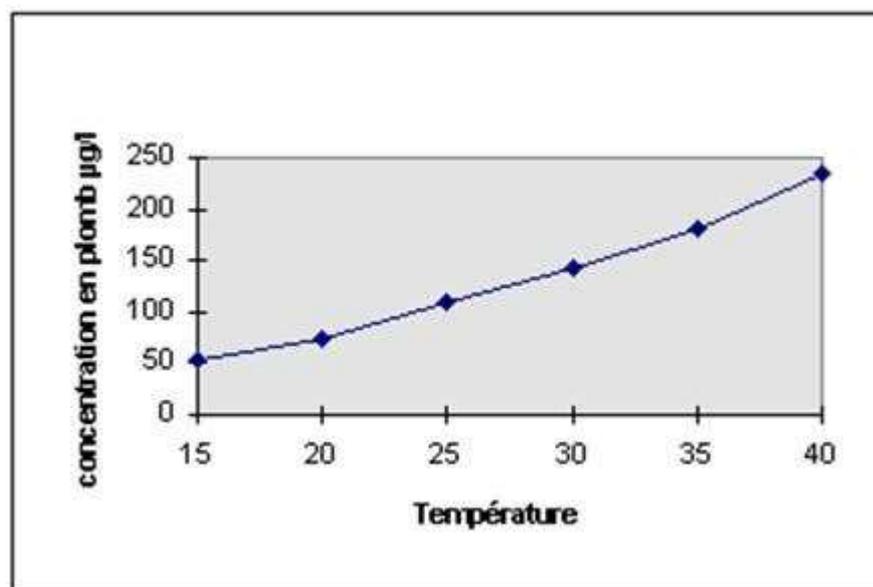
Thus, elementary lead does not dissolve in water under normal conditions (20°C, and pressure = 1 bar). It can dissolve in water as PbCO<sub>3</sub> or Pb (CO<sub>3</sub>)<sub>2</sub><sup>2-</sup>. A known example of a water-soluble lead compound is lead sugar (lead (II) acetate). Lead frequently binds to sulphur in the sulphide form (S<sup>2-</sup>), or to phosphorus in the phosphate form (PO<sub>4</sub><sup>3-</sup>). In these forms, lead is extremely insoluble, and is therefore immobilized in the environment. **Lead salts are therefore poorly soluble in salt or hard water** (the presence of other salts reduces the availability of lead to organisms due to precipitation of lead). In general, the acidification of a medium increases the solubility, mobility and bioavailability of lead. Thus, Lead compounds are generally only poorly soluble in soft, slightly acidic water.

According to ECHA Scientific report for evaluation of limit values for lead and its compounds at the workplace, (October 2019), the water solubility of solid lead is 3.2 mg/L (pH 6, 24 h) 185 mg/L (pH 11). **We consider it is of utmost importance to complete the data on water solubility of lead in the Annex XV report, such as:**

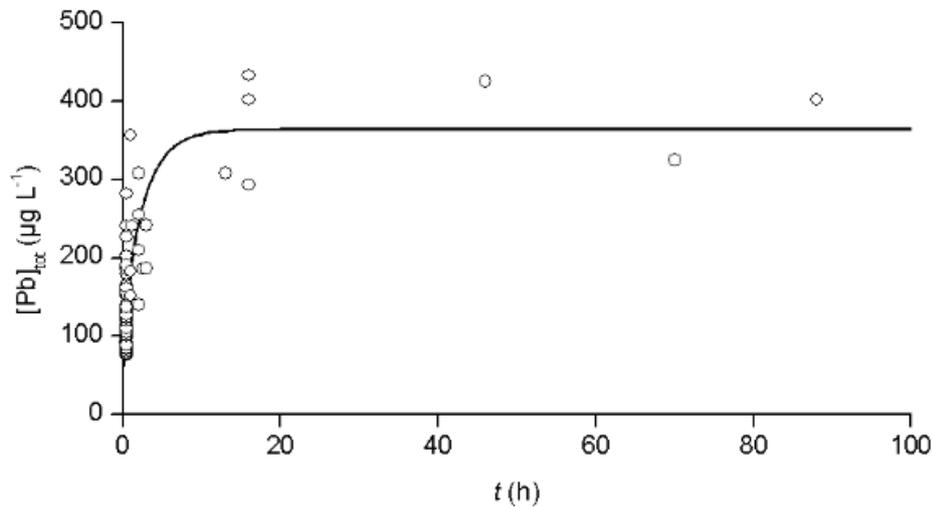
Pourbaix diagram under normal conditions (20°C, and pressure = 1 bar) for a given concentration of dissolved lead:



Or the Influence of temperature on the lead concentration in water.



Or also the influence of time which is well known regarding lead in water from lead pipes:



Variation of the total lead concentration measured as a function of the stagnation time of the water in a new pipe

L = 25 m; Diameter = 15 mm; [Pb] infinite = 364 µg.L-1; 19 <T <23 ° C; 7.48 <pH <7.83.

And of course, **the factors influencing the oral bioaccessibility of lead in soils have to be taken into account** (see for example INERIS report Ineris-21-180783-08802-v3.0, dated 2021/08/30, titled: Factors influencing the oral bioaccessibility of metals and metalloids in soils - State of the art - Characterization of the physicochemical properties of soils. Unfortunately, the report is written in French).

## 4. Optional derogations for shooting ranges (FACE / FITASC / ISSF/ESC)

### 4.1 ECHA's proposal

ECHA's proposal would permit the use of lead ammunition in shooting ranges that meet the specified requirements for lead recovery.

As regards the first optional derogation, ECHA proposes that the prohibition concerning placing on the market and using of lead gunshots does not concern shooting ranges having a permit granted by a Member State which can be granted:

- Regular [at least once a year] lead shot recovery with [>90%] effectiveness (calculated based on mass balance of lead used vs lead recovered in previous years) to be achieved by appropriate means (such as walls and/or nets, and/or surface coverage);

FITASC/ISSF, in their observations number 2 in July 2021 have already mentioned the inconsistency of 90% recovery. From where this number 90% comes from? What is



the scientific basis? How to define/measure 100%? It has been demonstrated that if lead could be toxic for human being, the most important parameter is the bioavailability, and mainly the gastric bioaccessibility, of lead.

- Containment, monitoring and, where necessary, treatment of surface (run-off) water to ensure compliance with the environmental quality standard (EQS) for lead specified under the Water Framework Directive; and
- Ban of any agricultural use within site boundary

As regards the second optional derogation, ECHA proposes that '*lead projectiles not defined as a gunshot*' (for example centrefire and rimfire bullets) can be used for sport shooting in shooting ranges if they have:

- Regular lead recovery with [ $>90\%$ ] effectiveness (calculated based on mass balance of lead used vs lead recovered) achieved by the means of bullet containment (i.e. bullet traps); and
- Ban of any agricultural use within site boundary.<sup>4</sup>

## 4.2 Legal assessment

### 4.2.1 Introduction

During the current EU level discussions on lead in ammunition, the question has been raised whether the operation of shooting ranges, which cause dispersion of metallic lead over limited areas of shooting facilities, fall under the requirements of REACH, and could become subject to restrictive conditions in terms of Title VIII of REACH.

Lead (Pb) is the primary component of traditional ammunition because of its density which in turn maintains velocity and energy during flight. Regular ammunition used typically contains lead (Pb;  $>90\%$  in weight), metalloids such as antimony (Sb) and arsenic (As) as well as varying amounts of nickel (Ni), zinc (Zn) and copper (Cu).<sup>5</sup> The basic operation of shooting ranges causes the dispersion of lead in the form of lead pellets and bullets over a shooting facility which is either accumulated at the range or recovered. ECHA has estimated that 35 000 tons of lead gunshots pellets and 42 000 lead bullets are spread over the outdoor rifle, pistol, trap, skeet, and sporting clay ranges in the EU27.<sup>6</sup>

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<sup>4</sup> Annex XV Restriction Report, pages 19-22.

<sup>5</sup> See for example Gómez-Sagasti et al 2021.

<sup>6</sup> ECHA, *Annex XV Dossier Proposing Restrictions on lead and its compounds*, 2021, p. 65.



## 4.3 REACH and ‘waste’

### 4.3.1 ‘Discarding’

The waste definition is well known: “any residue from a production, transformation or use process, any substance, material, product, or more generally any movable property abandoned or that the holder intends to discard”. Here, the shooter is the holder, not the proprietary of the shooting range<sup>7</sup>. In other words, the act of shooting a firearm is the act of discarding, namely the transformation from a useful to discarded material (i.e. waste) takes place the instant the shot is fired. However, the situation of *shooting ranges*, where rifles, pistols and shotguns are discharged, is different as used discarded lead ammunition is subject to various requirements on the sustainable management of potential environmental risks.<sup>8</sup>

### 4.3.2 Waste under REACH

In terms of Article 1(2), REACH lays down provisions for manufacture, placing on the market and use of substances, on their own, in mixtures or in articles. However, Article 2(2) of REACH provides that “Waste as defined in [Waste Framework Directive 2008/98/EC or ‘WFD’] is not a substance, preparation or product” within the meaning of REACH. By that provision, REACH defines ‘waste’ by reference to Article 3(1) of WFD (see above). Under Article 67(1) of REACH, the manufacture, placing on the market and use of certain substances are subject to restrictions: “A substance on its own, in a mixture or in a product, for which Annex XVII contains a restriction shall not be manufactured, placed on the market or used unless it complies with the conditions of that restriction”. **Therefore, as waste is not a substance, preparation, or product, it does not fall within the scope of REACH, and thus cannot be subject to restrictions under Article 67(1) of REACH.**

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7 The Court of Justice has noted that “the scope of the term ‘waste’ turns on the meaning of the term ‘discard’”; see for example Case C-129/96 *Inter-Environment Wallonie ASBL*, ECLI:EU:C:1997:628, para 26. The Court of Justice has also stated that the definition of waste must be interpreted widely to ensure a high level of protection about the Union’s objectives in environmental policy; see Case C-624/17 *Tronex*, EU:C:2019:564, para 18 and the case-law cited.

8 See for example Kajander and Asko Parri (ed.) 2014.



### 4.3.3 Waste Framework Directive (WFD)

It follows that the life cycle of substances, on their own, in mixtures or in products, **ends** under REACH when they enter the waste stage.<sup>9</sup> Inversely, REACH requirements are applicable from the point a recovered substance ceases to be waste and waste management controls no longer apply.<sup>10</sup> However, the point at which waste ceases to be waste is *a matter for waste legislation, and not REACH*.

The next step is to find out if a recycling process is possible. If this is not the case, waste needs to be disposed off. Recycling process covers recovery whereby spent lead pellets and bullets from shooting ranges return from waste status to raw material (i.e. lead and its compounds) by specialized operations leading to reuse of that substance.<sup>11</sup> Prior to that recovery, lead must be collected, sorted, and purified but, importantly, it *retains the status of waste until recovery operation is complete*.<sup>12</sup>

Article 6(1) of WFD lays down the framework conditions to determine the moment when lead scrap recovered from shooting ranges ceases to be waste and becomes, in the current context, a substance under REACH. However, it does not stipulate the specific conditions for leaving the end-of-waste status, as those specific conditions are to be adopted through implementing measures at the EU level. In other words, if criteria are set at EU level for certain specified waste streams, those end-of-waste criteria apply. Inversely to metallic scraps, including lead scraps, no such harmonized end-of-waste criteria have been set up at EU level. In the absence of such measures

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9 Albeit REACH is not applicable to waste, it prescribes that registration dossiers must include at least some information on recovery and disposal. REACH also obliges the manufacturers and importers of substances in quantities of 10 tonnes or more per annum to prepare a Chemical Safety Report and consider the waste stage of substances; see *ECHA Guidance on information requirements and chemical safety assessment*. Moreover, REACH requires the compilation of safety data sheets for dangerous substances and mixtures according to *Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006*, OJ L 353, 31.12.2008; see *ECHA Guidance on the compilation of safety data sheets*. It is also to be noted that Article 9(1)(i) of WFD obliges suppliers of articles, like ammunition, to provide information regarding the presence of candidate list substances in the articles supplied. From 5 January 2021 onwards, this obligation has been implemented through a database developed by ECHA.

10 Doctor Fluck has nicely encapsulated the term ‘discard’ as “...an action whose purpose is desist from using a substance or object for its original purpose, to liberate it from that intended purpose, or to de-dedicate it, without immediately allocating it to an new intended purpose, certain recovery activities being necessary to make it fit once again for its former purpose (recovery), or the substance or object being definitively withdrawn from any further use (disposal)”; see Fluck 1994.

11 See for example Opinion of Advocate General Jacobs in Joined Cases C-304/94, C-330/94, C-342/94 and C-224/95 *Tombesi*, ECLI:EU:C:1997:314, para 52 (“‘recovery’ is a process by which goods are restored to their previous state or transformed into a useable state or by which certain usable components are extracted or produced”).

12 In this respect, the Court of Justice has held that, “where waste has been fully recovered, having the consequence of conferring on the resulting substance the same properties and characteristics as a raw material, so that it can be used in the same conditions of precaution for the environment, that substance loses its quality as waste”; see also Joined Cases C-418/97 and C-419/97 *ARCO Chemie*, ECLI:EU:C:2000:318, para 94; and Cases C-9/00 *Palin Granit*, EU:C:2002:232, para 46; and C-283/07 *Commission v Italy*, EU:C:2008:763, para 61.



containing specifications and criteria, Article 6(4) of WFD provides that the Member States may decide case by case how certain wastes have ceased to be wastes, in accordance with applicable case-law.

In other words, Member States retain their competence under WFD until EU intervenes<sup>13</sup> which is intended to ensure that the subsidiarity principle is respected.<sup>14</sup> As the EU is silent on this subject, it is for Member States to define when lead pellets and bullets collected from shooting ranges cease to be waste and become (again) a substance within the scope of REACH.

#### 4.4 Conclusion

As derogations to the general restrictions, ECHA has proposed that lead ammunition may be used in shooting ranges if three main conditions are met: regular recovery of lead on soil, treatment of runoff water and no other activities on site such as agricultural use.

Waste is specifically excluded from the scope of REACH and REACH defines ‘waste’ by reference to Article 3(1) of WFD as “*any substance or object or product which the holder discards or intends or is required to discard*”.

Lead pellets and bullets in shooting ranges are waste because *shooters* have discarded them and left them to accumulate after they have served their intended purpose (i.e. discharged). In other words, the act of shooting the firearm becomes the act of discarding. The important point is that when lead pellets and bullets are discarded, these materials are considered a waste as defined in WFD.

In terms of Article 2(2) of REACH, discarded lead in shooting ranges is not a substance or mixture under REACH. As that waste is not within the scope of REACH, it cannot be subject to conditions of a restriction under Article 67(1) of REACH.<sup>15</sup>

Thus, today, ECHA intends to regulate waste management by means of REACH, and thus bypassing WFD.<sup>16</sup> However, lead gunshots and bullets in shooting ranges retain their status as waste until that lead has ceased to be waste and left the waste status.

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13 See for example Case C-60/18 *Tallinna Vesi*, ECLI:EU:C:2019:264, para. 25 (WFD “*does not, therefore, preclude national legislation under which, where no criteria are laid down at EU level for determining end-of-waste status as regards a specific type of waste, the end of that status of waste depends on the existence of criteria laid down in a generally applicable national legal act concerning that type of waste*”).

14 See Article 5(3) of the *Treaty on European Union* and *Protocol (No 2) on the application of the principles of subsidiarity and proportionality*. The principle of subsidiarity entails that EU does not act - outside the areas that fall within its exclusive competence - unless it is more effective than action taken at national, regional, or local level.

15 The Court of Justice has considered that the definition of ‘waste’ must be interpreted in line with the objective of WFD and Article 191(1) TFEU; Joined cases C-418/97 and C-419/97 *ARCO Chemie*, ECLI:EU:C:2000:318, paras 36 to 40; as well as Cases C-9/00 *Palin Granit*, EU:C:2002:232, para 23; and C-188/07 *Commune de Masquer*, ECLI:EU:C:2008:359, paras 38 and 39.

16 Waste management is defined in Article 3(9) of WFD as ‘*the collection, transport, recovery (including sorting), and disposal of waste, including the supervision of such operations and the after-care of disposal sites, and including actions taken as a dealer or broker*’; see *Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste*, OJ L 150, 14.6.2018.



Inversely to the ECHA's thinking, it is assumed that lead gunshot pellets and rifle bullets in shooting ranges are waste, and therefore do not fall under REACH, and thus cannot become subject to restrictive conditions.,

Therefore, any restriction under REACH on lead ammunition in shooting ranges, if adopted, would be *void* due to the EU's lack of competence (i.e. the legal basis of the ECHA proposed restriction would be wrong) and/or misuse of power (i.e. evading the procedure specifically prescribed by WFD for dealing an end-of-waste status of lead ammunition).

## 5. Reference to the general conclusion of “Addendum by FITASC and ISSF/ESC, internationally recognized shooting sport organizations”

Finally, we would like to reaffirm our willingness to contribute to a sustainable management of lead on sport shooting facilities, as formulated in the general conclusion of our document “Addendum by FITASC and ISSF/ESC, internationally recognized shooting sport organizations”<sup>17</sup>:

The ISSF and the FITASC share with the European Commission the absolute need for clay target shooting sport to be part of an ecological approach to lead management in sports facilities over the long term.

In July 2020, we sent ECHA a first report (“Contribution of FITASC prior to ECHA's decision regarding a possible call for restrictions on the use of lead shot at clay target shooting ranges”) which describes in detail the possibilities for clay target shooting sport to be part of this process.

In this document, we have completed the scientific studies which clearly demonstrate that it is not necessary to ban lead, fully or partially, for clay target shooting sport since we can safely manage it on the sports ground.

You must understand that, for the clay target shooting sport, questions of ballistics are a priority, especially since to date no solution to replace lead by another metal is acceptable neither in this respect, nor on the shooters' health plan.

Contrary to what ECHA has stated, the defense of lead use by FITASC and ISSF at the clay target shooting sport does not stem from any “organizational barrier”, but this defense is sustained by crucial ballistic and sport considerations and by our strong conviction that our lead management solution will be implementable at the European scale.

Our solution of lead management on the sports installations (i) fulfills an ecologic aim, AND (ii) meets the requirements of the clay target sport shooting as well as the needs of sports shooters, who, we are sure, will support its implementation.

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<sup>17</sup> see addendum produced on May 4th, 2021 by FITASC/ISSF:

[https://www.fitasc.com/upload/images/echa\\_mai\\_2021/20210504\\_addendum\\_may21\\_to\\_fitasc\\_contribution\\_july20.pdf](https://www.fitasc.com/upload/images/echa_mai_2021/20210504_addendum_may21_to_fitasc_contribution_july20.pdf)



Our solution is implementable because we now have a perfect knowledge of a scientifically grounded lead management, thanks to the work of the scientists consulted, and there are possibilities offered by the sport installations to apply the requirements of a European Charter to manage the lead.

With the scientists we have consulted, we are ready to cooperate with your scientist team to work on the redaction of a “European Lead Management Charter for Sport Shooting Ranges” as proposed in our contribution document of July 2020 (chapter 9).

A handwritten signature in black ink, appearing to read 'Jean-François Palinkas'.

Jean-François PALINKAS  
President of FITASC

A handwritten signature in blue ink, appearing to read 'Vladimir Lisin'.

Vladimir LISIN  
President of ISSF / ESC