Environmental and Ethical Aspects of Destruction of Ammunition

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Many decision-making situations today affect both personal safety and environment. In practice many of these decisions are made without an overall view and decisions are made with focus on either environment or safety. Now and then these two areas of regulations are at conflict, i.e. the best alternative according to environmental considerations is not always the safest way and vice versa. Such an example is the destruction of ammunition. The Swedish Armed Forces have large stocks of ammunition that were produced at a time when destruction was not considered. This ammunition will eventually become obsolete and must be destroyed.

The overall aim of the project is to develop a framework tool where the issues of environment, safety, ethic and costs are all integrated and thus support decision making. A second aim with the project has also been to contribute with knowledge about different destruction methods, their good and bad points and consequences to provide different actors better basis for decisions. In the first part of the project which is presented here, mainly the areas of environment and ethic are studied and shortly the area of personal safety.

In order to develop the intended framework tool two case studies have been performed: an environmental analysis by performing a life cycle assessment and an ethical analysis. With the help of these analyses’ three different methods of destruction of ammunition have been compared: Open detonation, Incineration in a static kiln including recovery and recycling and a combination of incineration and open burning including recovery and recycling.

Every method of destruction of energetic material, i.e. explosive waste or ammunition, results in environmental impacts both in short terms and long terms. The life cycle assessment shows that two things appear to be of importance for reducing the environmental impacts: Recycling the metals and air pollution control.

The ethical aspect of risk exposing and environmental impacts in the process of destruction of ammunition from the view of the risk-exposed, the decision-maker and the beneficiary was analyzed in a case study. One general observation from the ethical analysis is that future generations and people in foreign countries will be affected negatively by the destruction of ammunition. They are exposed to risks, have no possibility to make any decisions related to the destruction and quite often receive no benefit or compensation for any harm suffered. When choosing the method for destruction of ammunition, the general public should thus be given special attention.

The different methods of ammunition destruction are all connected to different kinds and levels of risks and hazards. Here the aim has to investigate different assessment and analysis methods of risks and to identify at what level they are suitable and might be recommended. From the review we found that there is a lack of established risk analysis methods on policy level. This is an issue which ought to be regarded when the legislation is to be redrafted.