Examination of Firearms and Forensics in Europe and aCross Territories

Project summary and recommendations

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Project overview

Background
This summary presents the main results and recommendations of the EFFECT project funded by Directorate General Home Affairs (ISEC) with the aim of:

- Assessing the nature and prevalence of gun enabled crime across select EU and candidate countries.
- Identifying challenges to effectively preventing gun enabled crime in the future through legislation and policing.
- Identifying successful initiatives that reduce gun enabled crime.
- Examining the potential role of ballistics intelligence gathering and cross-border sharing in the prevention of the illegal use of firearms.

The main findings are discussed and organised and around five main themes that emerged from the data:

- The nature and prevalence of gun enabled crime
- Development and implementation of legislation
- The detection and policing of gun enabled crime
- The use of ballistics intelligence
- Firearms Focal Points

Work Packages

Work Packages One and Three
The objectives of these two work packages were to:

- Assess the nature and prevalence of gun enabled crime across select EU and candidate countries using desk based research.
- Identify challenges to effectively preventing gun enabled crime in the future through legislation and policing by interviewing key personnel representing policy, policing, statistics, ballistics analysis, and Non-Governmental Organisations.
- Identify successful initiatives that reduce gun enabled crime through both desk based research and interviews.

Work package one focused on Southern Europe including Western Balkan States (Bulgaria, Croatia, Italy, FYR Macedonia and Serbia), whereas work package three focused on Northern Europe (Belgium, Denmark, France, Germany, Netherlands, Norway, Portugal, Spain, Sweden, and the UK).

Work Package Two
This work package involved analysis of the impact of sharing ballistics intelligence from the Western Balkan States and bordering countries, on gun enabled crime in the EU. Objectives were:

- To assess how ballistics intelligence is gathered and shared within and between countries by interviewing ballistics technicians.
- To assess the nature and volume of ballistics intelligence processing through the collection of quantitative data.
- To utilise ballistics intelligence derived from 1,000 bullets and cartridge cases recovered from crime scenes in Serbia and to correlate these images with those held in ballistics databases of participant countries (Denmark, Italy, Kosovo*, Macedonia, Norway, and Sweden) to show how crime guns are being moved between these countries and beyond, and to illustrate the types of crimes that are being committed using the same weapon transnationally.

*References to Kosovo shall be understood to be in the context of Security Council resolution 1244 (1999).
The Nature and Prevalence of Gun Crime

Question: What is the prevalence of gun crime across Europe?

Currently, it is not possible to determine the true extent of gun enabled crime across Europe due to the fact that ‘gun enabled crime’ is not an identified notifiable offence category, nor is it consistently defined in legislation. Countries do not consistently record the presence of a firearm when a crime has been committed/recorded. Statistical data obtained from each country concerning the amount of crime committed with a firearm revealed more than 20 different offence categories. Homicide and robbery were the two categories in which the presence of a firearm was most commonly identified. However, three (out of 13) countries did not report homicides with a firearm, and seven (out of 13) countries did not report robbery with a firearm when data were requested concerning ‘the use of firearms in crime’. Some countries returned data that simply identified the number of crimes against the ‘Firearms Act’ or equivalent, and these did not specify whether they were crimes of violence or crimes regarding the licensing or possession of weapons.

Participants who were interviewed expressed a range of opinions regarding what constituted gun crime in their country. Many referred to local legislation and penal codes, whereas some suggested that ‘real’ gun crime is ‘a violent crime in which a firearm is used’, ranging from robbery, assault, and murder and including terrorist incidents. Interviewees were clear that ‘better data’ needs to be obtained regarding the use of guns in crime so that an adequate response can be developed to what is generally perceived as an increasingly important issue. Moreover, the availability of reliable and valid data that captures the full range of crimes in which firearms are used will enable the impact of local and national responses to gun crime to be evaluated, which are in general lacking.

Recommendation 1:
- Countries should develop their crime recording procedures to indicate when a firearm has been used within any existing notifiable offence.

Recommendation 2:
- A cross-EU definition of ‘gun crime’ should be adopted within the legislation of each MS. Gun crime should be defined as ‘any actual, attempted or threatened act of violence, or terrorism in which a firearm or an item perceived to be a firearm has been involved (used or recovered), and/or the possession of a prohibited firearm’

- Statistics should be compiled on an annual basis and ‘gun crime’ statistics reported in relation to the following categories:
  - Crimes in which a firearm has been used and resulted in death
  - Crimes in which a firearm has been used and has resulted in non-lethal injury
  - Crimes in which a firearm has been used to threaten or coerce a victim
  - Incidents of Terrorism where a firearm has been involved (recovered or used)
Recommendation 3:
- Gun crime statistics should be reported as frequencies, a percentage of reported crime and in relation to the number of offences per 100,000 of the population.

It has been suggested that mortality data can provide a proxy measure for gun crime prevalence, however this is only the case for serious instances that lead to death. Victim surveys too are challenging to implement in that they are expensive, and are inconsistent in their definition of crimes, making international comparisons difficult. Consequently, a range of data collection activities are needed in each country using approaches that are as standardised as possible given the local context, in order to capture data that can be triangulated to provide a true picture of gun crime.

Recommendation 4:
- Routine emergency room data should be collated that identify the number of people attending the emergency department of local hospitals due to gunshot injury; these data need to be collated and reported as the rate of emergency room visits for the treatment of firearms related injury per 100,000 of the population.

Recommendation 5:
- Population surveys should be conducted on a regular basis in order to provide retrospective estimates of gun crime experience to supplement health and criminal justice surveillance data and these data should be reported as the rate of victimisation cause by gun crime per 100,000 of the population.

Recommendation 6:
- An EU Directive should be devised that focuses on identifying and monitoring illegal firearms.

The Development and Implementation of Legislation:

Question: What assists and impedes the development and implementation of gun crime legislation?

Answer: Participants acknowledged that firearms legislation typically focuses on the control of legally held firearms, and that this is most often amended in response to gun enabled crime. In addition, sentencing rules had been modified in some countries to increase the severity of punishment for crimes committed with a firearm. It was identified that firearms used in crime are most often illegal rather than legally owned firearms. There were divergent views regarding whether existing national firearms legislation was adequate, and whether additional national and/or EU wide legislation is needed. Some participants felt that current firearms legislation was completely adequate, whereas others were concerned that it was outdated. Participants reported that the process of developing and implementing firearms legislation in response to gun enabled crime was very challenging, and that the tendency to make small changes leads to a situation where legislation is unclear and inconsistent and requires a complete overhaul.
Participants identified that even when the firearms legislation was good, it was not always understood, or enforced accurately by courts, prosecutors and the police. The process of amending legislation is typically driven by major events (e.g. Paris attacks) as these events serve to soften public opinion, increasing the likelihood that changes will not be challenged. The fact that gun crime is a political issue was deemed to be problematic as politicians may raise issues of gun crime in their election manifestos, but then not deliver once they have been elected. Lobby groups are widely consulted on legislative change, but this was not always perceived as helpful with some indicating that this slowed down the process. Indeed public opinion was deemed to be a very influential factor in relation to the development and implementation of legislation. In countries which were deemed to have a high level of gun ownership, societal views that were positive towards gun ownership, and vocal shooting clubs and lobby groups, legislative changes were more widely challenged due to the onus of legislation being the regulation of legally held firearms. Additional factors that make the process of implementing legislation more difficult include: recent national conflict, existing other priorities (e.g. economic pressures), the impact of the economic crisis on resources, and the fact that ‘gun crime’ has not been officially recognised as an issue requiring a legislative response.

Despite the United Nations Firearms Protocol definition of what constitutes a firearm, there remain differences across the EU in defining firearms within legislation. It was clear that firearms legislation varied considerably, even when countries were adopting policies following the EU Firearms Directive, and that these inconsistencies led to loopholes that could be exploited by criminals. Of specific concern were the divergent definitions and control of antiques weapons; disparities in deactivation standards between countries, and lack of consensus regarding the definition and control of readily convertible firearms.

**Recommendation 7:**
- The stature of antique weapons should be reviewed in order to preserve historical items in the most respectful way whilst ensuring that criminals do not have access to functioning firearms.

**Recommendation 8:**
- The definition of ‘readily convertible firearms’ should be harmonised and a process of type approval for blank firing / acoustic signalling firearms should be implemented across all member states whereby firearms designs are assessed both before sale and continuously thereafter in order to ensure non-convertibility. This process could be incorporated into the amendments to the EU firearms directive 91/477/EEC and should be linked to EU importation regulations.

**Recommendation 9:**
- Deactivation standards should be harmonised and enforced across MS and when deactivation standards are changed, these should be applied retrospectively to all firearms that have been deactivated based on historical standards. If this is not feasible, then it is recommended that these weapons should be subjected to general weapons law.

**Recommendation 10:**
- The EU should survey international deactivation standards in order to inform decisions taken to develop harmonised deactivation standards across the EU.
Discrepancies in the basic licensing conditions of firearms between countries were highlighted as a mechanism through which firearms legally purchased in one country can be moved into countries where their ownership is illegal, thereby making it difficult to monitor and identify legal and illegal firearms.

Recommendation 11:
- Clear guidelines should be developed to clarify what data relating to gun crime and its prevention can be shared between MS, and the processes for sharing these data need to be clarified.

Recommendation 12:
- Personnel at all levels should be trained concerning the most up to date firearms legislation in each country.

The Detection and Policing Of Gun Crime

**Question:** What are the challenges to the effective policing of gun crime in Europe?

**Answer:** The majority of participants interviewed identified that firearms were of secondary importance in the detection and policing of crime where a firearm is involved. Instead of focusing on the firearm, investigations are reactive and focus on identifying and apprehending the perpetrator. Police resources are allocated to the investigation of such crimes, as deemed appropriate. However, many participants felt that there was much less emphasis placed on the proactive investigation of the source and supply of a weapon, and the history of its movement into criminal circles. In practice, considerably less effort and resources are allocated to such proactive policing. A more coordinated approach to identifying high risk firearms, supply networks and emerging threats is required.

The supply of firearms is also increasingly difficult to police because of the emergence of the dark web as a source of firearms.

Recommendation 13:
- Prioritisation regarding the investigation of GEC should be maintained at all times and with specialist resources identified and deployed accordingly. Doing so will help change the investigative mind-set of law enforcement officers, enabling a police response which is thorough, proactive and which includes the investigation of the source/supply of the weapon as a priority rather than a secondary consideration.

There was some evidence from participants that the most effective way to intervene in order to reduce the levels of gun crime is by adopting a multi-agency approach with major emphasis on the involvement of the community. Various examples of interventions were given where the police worked in partnership with the local council, Non-Governmental Organisations (NGO’s) and voluntary groups. By focusing on gun crime as a specific issue and by adopting a holistic approach with appropriate levels of resourcing, significant decreases in the levels of gun crime can be achieved that provides reassurance to the community.
It was felt that such partnership activity cannot be viewed as a short term measure but needs to be maintained over the long term to build on what has been achieved and to deliver lasting beneficial change. Several factors were identified that influenced decisions to end initiatives designed to reduce gun crime, including responding to economic pressures and austerity measures, and the higher prioritisation of other issues including drugs and the refugee crisis. Some participants indicated that these decisions were taken in response to an identified reduction in levels of gun crime.

**Recommendation 14:**
- A multi-agency approach to tackling gun crime should be adopted as good practice building on the approach taken by existing successful initiatives. The involvement of the community is of paramount importance. Such a holistic approach should recognise the socio-economic context in which the causes lie.

**Recommendation 15:**
- A long-term approach should be taken to the establishment of initiatives to tackle gun crime, and resources should not be removed in response to a short term drop in levels of recorded crime.

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**The Use of Ballistics Intelligence**

**Question:** How can ballistics intelligence be used to combat gun crime?

**Answer:** Data illustrates that the current system of conducting correlations across borders is normally reserved for exceptional cases, or where there is specific intelligence or information to support a correlation/comparison via the transfer of physical material/duplicates, or through the utilisation of the IBIN network. A number of limitations were identified within this current system of work, namely its ‘reactive’ nature and possible limitations regarding the international exchange of ballistics data.

Participants were broadly in favour of cross-border ballistics information sharing. An improved Pan-European system could enable the greater sharing of ballistics data that is often ‘silged’ on a country-to-country basis; this was more pronounced in countries where the participant was not an IBIN member.

Participants expressed mixed views concerning the technical and resource viability of a shared cross-national ballistics system. The specific barriers to adopting such a system included perceived challenges concerning the potential for an increase in data ‘noise’, and a consequent lowering in the chances of identifying ballistic ‘hits’ expeditiously if all European Open Case File (OCF) data were to be compared routinely.

There were also concerns about the cost and resource implications of performing a greater number of correlation reviews.

Participants expressed that enhanced cross-border ballistics information sharing could be achieved through the intelligent use of a cross-national system. As an example, geography,
firearms demographic information, risk and threat information and intelligence data could all be used to define ballistics correlation activity in order to achieve the most efficient and valuable use of such a system. The current Scandinavian IBIS system architecture demonstrates good practice in this area.

Recommendation 16:
- Consideration should be given to implementing an EU-wide Ballistics Information Network. The network should facilitate the proactive correlation of European ballistic material based on an agreed Pan-European protocol. Such a network should incorporate a common set of processes and products in line with those of the Firearms Focal Points.
- In order to inform such a development, a feasibility study should be carried out to determine the achievability of a pan-EU network. Such a study should assess the technical and process capabilities required to implement such a solution. The study should specifically seek to address participant’s concerns regarding data noise, whilst providing a detailed understanding of the potential limitations and benefits of such a system.

In the course of delivering the Work Package Two activities, a number of issues and challenges relating to the sharing of ballistics data for the purposes of ballistic comparison were encountered. A number of beneficiaries highlighted that the sharing of ballistics data could be considered to be contrary to the European Data Protection Act, in that it may disclose, or could be linked to, personal information.

In conducting the cross-national ballistics correlation activity, it has been noted that the majority of data contained within the utilised Ballistics Identification System (BIS) is directly concerned with the demographic information relating to the firearm or ballistic material. One beneficiary represented the view that a Case File Number could be used to link information contained within the BIS with information contained in the Case Management System of the participant, and this would constitute a breach of the Act. In order to address this concern, verification has been provided that this would only be possible if the user had access to both systems, as there is no link between the BIS and the investigative case management system.

The above provided a representative example of a concern that has been expressed by a number of participants regarding data protection and the sharing of ballistics data. This is an important issue as one of the key benefits of sharing ballistic intelligence is the anonymisation of the data and the fact that no personal information is exchanged.

Recommendation 17:
- A definitive statement on the position of ballistics data in relation to European Data Protection regulations should be clearly articulated in order to facilitate the consistent sharing of information on a Pan-European basis in order to support a cross-national ballistics information system and its associated activities.

The ballistic comparison activity carried out as part of the programme of activity has not only generated a substantial number of ballistics ‘hits’ but it has also highlighted significant trends in the distribution of firearms types across the participating countries. These have been observed
through the class and subclass characteristics of the processed data. It is apparent that this data, along with Pan-European ballistics linkage information could provide a critically valuable resource for the intelligence and ultimately investigative capabilities within the EU. However, at the present time, there is no one central location for the collection, integration, evaluation, analysis and dissemination of ballistics data and associated intelligence/information.

Recommendation 18:
- A dedicated European Firearms Fusion Centre should be created within Europol to collect, integrate, evaluate, analyse and disseminate ballistics data and reporting information from the European and SEE European Firearms Focal Points, as well as from data contained with the proposed EU and South East European Ballistics Information Network.
- The European Firearms Fusion Centre should act as the conduit for the facilitation of Pan-European investigations and intelligence matters following a cross-border ballistic hit facilitated by the ballistics correlation server.

Recommendation 19:
- Consideration should be given to the establishment of a South East European Ballistics Information Network. Such a network should be established to operate in alignment with the proposed EU-wide Ballistics Information Network in order to facilitate the sharing of ballistics information both within the region and with the EU.

Recommendation 20:
- All beneficiaries in the South Eastern European region should be provided with requisite support to acquire and effectively utilise the appropriate technology to develop ballistic intelligence. This should include support in implementing processes and developing an infrastructure that enables them to further reduce the availability and use of illegal firearms.

The cost implications of acquiring and staffing forensic capabilities in relation to the examination and analysis of ballistic material for territories that experience relatively low levels of gun crime can mean that the investment in ballistics technology, infrastructure, and staff is difficult to justify when compared to other competing priorities. In addition, participants expressed contrasting views concerning the strengths and weaknesses of the available ballistics comparison systems, with factors such as cost, systems used by neighbouring countries, networking capability, and the ability to interface with IBIN, influencing these perceptions.

Interpol does provide support to its members through the provision of the global Interpol Ballistics Information Network, which provides participants with the ability to cross-match against the databases of other participating states on a case-by-case basis, although the data suggests that this capability is not used on a routine basis. In addition to the limitations of the IBIN network highlighted above it is noteworthy that not all territories within the region are members of Interpol. In addition, it is also noted that a number of countries inside the EU are not members of the IBIN network, this includes some countries who are users of the technology utilised within the IBIN system architecture, namely IBIS.
These factors combined with the fact that more than one BIS is in use in Europe, and that different systems are not compatible with each other, leads to an inconsistent approach to the exchange of ballistics information on a Pan-European basis. The need for a consistent system of information sharing is clear.

Recommendation 21:
- Interpol and Europol should work closely to provide support, good practice guidance and technical capability to all EU countries and neighbouring states in regard to ballistics intelligence and the sharing of ballistic material. This should be in line with the development of the European Firearms Fusion Centre and the creation of an EU-wide Ballistics Information Network. Such work should ensure the development of a complete and robust Pan-European intelligence picture in relation to the criminal use of firearms.

Considerable variations in the time taken to process ballistic material at the laboratory impacted directly on the effectiveness of the sharing of ballistics data. It was noted that homicide/terrorism cases were consistently prioritised and actioned within a five-day turnaround, whereas other crime testing could take up to 60 days. Only two of the eight participants reported that they had a backlog of material to process at the time of interview, however, it was expressed by a number of participants that ballistics evaluation was secondary to Trace Evidence Recovery (TER). These TER processes often caused considerable delays in ballistic material being analysed.

Recommendation 22:
- A standard, best practice time scale expectation for the acquisition, correlation, and reporting of ballistic crime related items should be considered in order to increase the intelligence and investigative value of ballistic material. This should be based on crime type and public impact and should ensure the integration of TER and evidential processes.

A particular procedural challenge highlighted within the research is the method of defining and counting ‘hits’. Participants provided variable accounts of what does and does not constitute a hit, and how hits are both counted and recorded.

Recommendation 23:
- Best practice guidance should be published in line with the creation of an EU-wide Ballistics Information Network, defining ballistic hit recording protocols.

In accordance with the recommendations and narrative surrounding the harmonisation of crime data, it is apparent that this inconsistency may cause data to be misread and misreported. Throughout the research, it was noted that with the exception of the United Kingdom and its dedicated National Ballistics Intelligence Service (NABIS), the majority of participants operated their ballistic forensics and firearms intelligence capabilities separately. This appears to be a very standard model of operation based on the requirement of the laboratories to service the need for evidential products. This model does provide for the considerable ‘siloing’ of data and knowledge within the forensic, intelligence and investigative business areas. The NABIS example does appear to demonstrate that the integration of these areas and the development of integrated processes can result in a considerable reduction in gun enabled crime.
Interviews suggested that there was limited knowledge on how the ballistic laboratories carried out their work, specifically in relation to the Open Case File (OCF), and the potential value that they might be able to provide based on a ballistics intelligence type model, as demonstrated in the United Kingdom.

Recommendation 24:
- Ballistic intelligence training and best practice guidance should be developed for relevant staff in member states. This should include Investigators, Intelligence Staff, and Prosecutors and should include the provision of knowledge and understanding regarding the value of carrying out checks against the Open Case File.

Throughout the research, the team noted that there was generally a good uptake in the accreditation of laboratories to the ISO17025 standard, however in some cases, this was not achievable due to cost, resources or other reasons. In noting the challenges and process of achieving accreditation it would seem prudent that, as part of the development of an EU-wide Ballistics Information Network, all labs in the EU should aim to operate to this standard.

Recommendation 25:
- To ensure best practice, all labs across EU should strive for ISO 17025 accreditation.

The recommended establishment of a South East European Ballistics Information Network should adopt the same approach in order to support the consistent sharing of information with EU partners.

Recommendation 26:
- To ensure best practice all labs in the proposed South East European Ballistics Information Network should strive for ISO 17025 accreditation.

The dedicated research activity of Calabria University highlighted another area for development within the forensic arena, namely the training, evaluation and certification of Ballistics Experts across the EU.

Although the project did not seek to assess staff or their training it was apparent that no overall EU-wide accepted Firearms Expert test existed. In the absence of such a test, local training and certification was the accepted norm, however due the variation in standards and tests, such an approach did not provide a robust model across the participants.

It was highlighted that there was no register of Ballistics Experts in Europe. The combination of these two factors had, in some cases, caused Experts from a non-firearms field to be used in firearms cases with detrimental results.

Recommendation 27:
Consideration should be given to the development of accreditation standards for firearms experts and the creation of a register of firearms experts working inside the EU. Such a register could be held by European Network of Forensic Science Institutes (ENSFI).
Firearms Focal Points

Question: What roles might a Firearms Focal Point serve?

Answer: This was not something that participants were asked about directly. Rather, this is a consideration that arose as a process of reviewing our findings and the broader recommendations of the project. In addition, the project team recognises that during the period of project delivery, the major terrorist incidents in Paris and Brussels have seen considerable emphasis placed on this subject area.

As part of this focus, the EU announced in COM (2015) 624 the development of Firearms Focal Points (FFP) for each country in the EU. This proposal is aimed at improving the intelligence picture concerning the use of criminally held firearms and illicit trafficking activities; we believe it timely to consider how our findings may shape the role and function of such a structure.

Recommendation 28:

- It is recommended that in all EU member states one national central point shall be established to gather, analyse and disseminate data and intelligence information regarding GEC. This will ensure that accurate intelligence-led knowledge about gun crime is equally shared amongst law enforcement agencies, within and across EU member states, allowing for regional as well as cross-national factors that have an impact on GEC to be highlighted and effectively responded to.

Recommendation 29:

- The individual FFP’s should, through an agreed protocol and Memorandum of Understanding (MoU), feed information, intelligence and data to the European Firearms Fusion Centre based at Europol.

Recommendation 30:

- Given the dynamic character of gun crime, FFP’s should be trained and resourced accordingly in order to ensure that the role of the FFP is both focused and exclusive. Good practice should be developed in support of this process from successful examples such as those seen in the UK with the National Crime Agency (NCA) and NABIS.