

Developing Forensic Science Analysis Infrastructure for Better Policing and Investigations: Recommendations for Policy Makers

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POLICY BRIEF

Executive Summary

Forensic science is not a modern advance; rather it has been prevalent in various forms throughout the decades. The utilization of scientific tools to gather evidence regarding crimes is a practice which was observable in policing as far back as the 14th century. However, in Pakistan, there has been a lack of infrastructural evolution to accommodate the modern forensic investigation trends. Even though, there have been claims of adopting modern policing methods and techniques, the same is not seen when it comes to the expansion of infrastructure to accommodate forensic science techniques. This creates hurdles in effective policing and investigations. Emphasis should be laid on the development of a futuristic and modern infrastructure that revolves around forensic science and caters for the legal and structural requirements of forensic science. Adopt legislative measures in order to strengthen the capability of judiciary and LEAs to provide them with freedom and training to persecute extremist elements. Considering this, the policy brief proposes the following recommendations:

- Establish provincial forensic analysis infrastructures. The National Forensic Science Agency may assist the provinces in the establishment of the provincial infrastructure.
- A centralized DNA indexing system needs to be introduced and implemented that allows for the collation of data.
- Drafting of legislations that provides legal cover for DNA/Fingerprint collection.

More specific recommendations to this can be found at the end of the document.

Issue to be analyzed

Lack of a centralized and comprehensive Forensic Analysis infrastructure in Pakistan allows for inefficiencies, redundancies and prosecution shortfalls. The lack of a forensic analysis infrastructure and practice significantly hampers Law Enforcement Agencies (LEAs) abilities to prosecute and charge criminals. This is especially visible in the case of repeat offenders. It also hampers the process of victim identification in disasters.

Analysis:

Forensic Science is emerging globally as one of the most prominent aspects of modern policing. Through the utilization of various forensic techniques, analysts can provide conclusive and irrefutable evidence regarding a crime that has been committed. Modern policing infrastructure is also based around the development of forensic science infrastructure. However, in Pakistan, traditional policing methods take precedence over forensic science, reflected in the way that forensic science infrastructure in Pakistan is shaped.

The foundation of official forensic science agency in Pakistan was laid during a meeting of the Economic Coordination Council in 2002. As a result, the National Forensic Science Agency

(NFSA) was formed under this directive. The NFSA was formed in order to establish more forensic science laboratories and to impart technical training to other agencies, and crucially, to coordinate with Law Enforcement Agencies (LEA), to help with investigations and policing.¹ The NFSA as an institution was placed in the National Police Bureau under the purview of the Ministry of Interior. The NFSA is designed to have various departments and has been assisting the LEA in prosecution of criminals.

Following the model of the NFSA, Punjab also introduced the Punjab Forensic Science Agency (PFSA) Act in 2007. The Act allowed for the formation of the PFSA, an agency which is designed to help LEAs in various investigations within the domain of Punjab.² The PFSA, to its credit, has been able to establish eight forensic science laboratories throughout Punjab.

The formation of the NFSA and the PFSA is a step in the right direction. However, the same cannot be said when it comes to the status of other provinces of Pakistan. The provinces of Balochistan and Sindh have passed their respective Forensic Science Agency Acts in 2015³ and 2017⁴, yet they have been unable to erect any forensic science apparatus. The passing of these Acts does not hold much for the establishment of forensic science infrastructure in Sindh and Balochistan. Instead, these provinces, in particular Sindh, have opted to establish forensic science laboratories within the existing infrastructure of universities or police. The establishment of the Sindh Forensic DNA and Serology Laboratory (SFDL) in the University of Karachi, is an example. Similarly, Balochistan Police has also established a Forensic Science Laboratory.⁵ It is detrimental because it introduces redundancy and unauthentic results into the mix. Instead of opting for a central agency, these provinces have gone in the direction of opting for stop-gap measures to solve a long term issue.

The province of Khyber Pakhtunkhwa (KP) has very recently passed the Khyber Pakhtunkhwa Forensic Science Agency Act in August 2020. It remains to be seen if KP will be able to establish a Forensic Science Agency or will it follow the same path that Sindh and Balochistan have taken.

Therefore, a case can be made that there is a lack of synergy among the provinces due to the difference in forensic science infrastructure. It should be noted that the utilization of forensic science is not for policing only but it is also an essential tool for disaster management as well. The identification of victims during a disaster through the utilization of DNA testing is also a duty performed by forensic science institutes. Unfortunately, due to the lack of a central forensic

¹ National Forensic Science Agency, "About Us," accessed October 29, 2020.

² Provincial Assembly of Punjab, *The Punjab Forensic Science Agency Act 2007*, (2007).

³ Provincial Assembly of Balochistan, *The Balochistan Forensic Science Agency Act 2015*, (2015).

⁴ Provincial Assembly of Sindh, *The Sindh Forensic Science Agency Act, 2017*, (2017).

⁵ Balochistan Police, "Forensic Science Laboratory," accessed October 29, 2020, <https://balochistanpolice.gov.pk/sdev>.

agency in KP, Balochistan and Sindh, there is a lot of backlog and delay in the identification of victims. This has been visible in the various disasters that have taken place recently. The most recent one being the unfortunate PIA crash in Karachi. Many of the families of the victims were not satisfied with the forensic identification done by the Sindh administration and demanded that the PFSA and the NFSA step in.⁶ Therefore, the lack of forensic capacity hampers the progress of the forensic science investigations.

Barring Punjab, no province has ventured into the development of a Provincial Forensic Agency. Provinces have passed acts for the establishment of forensic agencies but so far, they have not been able to materialize. This results in a mismanaged approach to data collection. The provincial forensic agency can be regarded as the central node of the province when it comes to the collection of forensic evidence. Therefore, the establishment of provincial forensic science agencies must be emphasized. Through the establishment of provincial forensic science agencies, there would also be the lessening of workload on the PFSA and NFSA, when it comes to data collection and analysis for other provinces.

Another issue of importance is the lack of synergy between provincial forensic agencies. Although, currently a provincial forensic science agency has been established, there still appears to be a lack of coordination, which manifests itself in the absence of a central DNA database. Pakistan does not maintain a centralized database of criminals which contributes to redundancy and backlog. Due to this, there is an increased inefficiency when it comes to forensic science investigations.⁷ However, it must also be stated that there has been a practice of maintaining a DNA database, especially by the PFSA. The PFSA maintains a criminal DNA database of around 30,000 individuals.⁸ However, that database is only limited to one province.

One of the avenues that can be explored in this regard is the Combined DNA Index System (CODIS) that the US employs. The CODIS is a repository of criminal forensic data that is collected throughout the various States of the US. CODIS is maintained by the Federal Bureau of Investigation (FBI).⁹ A key advantage of having a central repository is that it is a reliable and quick method of suspect identification. If such a system is to be implemented in Pakistan, it will allow for a central allocation of all the forensic evidence data from the provinces. This database can be held under the NFSA or even the National Police Bureau. The forensic evidences that are collected from the different provinces can be collated in this central database. This will also allow the provinces the ability to scan their suspect DNAs against the vast central database to

⁶ Imran Ayub, "Families of PIA crash victims cast doubts over Sindh govt-funded KU lab," *Dawn*, June 14, 2020.

⁷ Asif Chaudhry, "Rise in habitual criminals due to low conviction rate," *Dawn*, May 30, 2017.

⁸ Sher Ali Khalti, "'PFSA 2nd largest, reliable forensic lab in world'," *The News*, June 12, 2020.

⁹ Federal Bureau of Investigations, "CODIS," accessed October 29, 2020, <https://www.fbi.gov/services/laboratory/biometric-analysis/codis/codis-and-ndis-fact-sheet#:~:text=CODIS%20is%20the%20acronym%20for,used%20to%>

identify any repeat offenders. The PFSA used a similar method in order to identify the prime suspect of the Motorway Rape incident that took place on the 9th of September, 2020.¹⁰ However, since that repository of data is very small and is only concerned with the province of Punjab, it has limited scope in application.

An important facet regarding forensic science is the legal support. By legal support, it is meant that the legislation regarding the collection of DNA evidence should be enacted. By providing legal cover to LEAs, there can be a judicial precedence to implement a standard DNA collection procedure throughout the country. Inspiration can be taken from the *DNA Fingerprint Act of 2005*, which was passed by the US. The law authorizes LEAs to conduct DNA Samples from person(s) arrested or detained under federal authority.¹¹ In Pakistan, such a bill may be introduced at Federal and Provincial levels, in order to declare it mandatory for the LEAs to collect DNA sample from arrested individuals. Considering the dearth of resources, it is also advisable to only include crimes of heinous nature, such as murder, rape and molestation in order to limit the massive influx of forensic data, which may overburden the authorities.

Further, the current legal structure in Pakistan does not cater to DNA evidence as primary evidence; rather it views it as corroborating evidence. Interpretation of DNA evidence is made under the Qanun-e-Shahadat (1984).¹² The legal interpretation of DNA evidence under this law by the judicial officers is that DNA is termed as medical evidence and the technicians that conduct the DNA tests are treated as medical experts.^{13 14} Therefore, instead of being a primary evidence, it is relegated to being a secondary or corroborating evidence. Specific laws need to be introduced which highlight the legal importance of DNA evidence and that leave no ambiguity in its admissibility to court.

Similarly, it is advisable to ensure the development of a forensic science infrastructure within major prisons as well. This will allow for better coordination among the forensic and policing departments and also streamline the process of DNA sample collection. Such laboratories should initially be established in maximum security prisons, which incarcerate the most dangerous and notorious of criminals. Slowly, this can be expanded to other minimum security facilities as well.

¹⁰ News Desk, "Motorway Rape Case: Prime suspect Abid Malhi arrested from Faisalabad," *Geo News*, October 12, 2020.

¹¹ *S.1606 - 109th Congress (2005-2006): DNA Fingerprint Act of 2005*, (2005), <https://www.congress.gov/bill/109th-congress/senate-bill/1606>.

¹² Shahbaz A. Cheema, "DNA Evidence in Pakistani Courts: An Analysis," *LUMS Law Journal* 3, 03.

¹³ Ibid.

¹⁴ Huma Jamil, Phone Interview, November 4, 2020. Ms. Huma Jamil is a legal expert and is practicing in Islamabad Courts.

Recommendations:

- The establishment of provincial forensic science agencies must be emphasized, in KP, Balochistan and Sindh.
- The National Forensic Science Agency (NFSA) should provide a blueprint to provinces for the establishment of their respective forensic science agencies.
- Rather than viewing forensic science as a tool to be outsourced to private laboratories, the government should view it as an intrinsic part of modern policing.
- Creation of a Central DNA Index System housed under the National Police Bureau or the NFSA. Inspiration can be taken from the Combined DNA Index System (CODIS) that the US under the Federal Bureau of Investigation (FBI) employs.
- Enacting of laws specific to DNA collection. Federal and Provincial legislatures can be moved to introduce laws that make DNA collection from offenders mandatory in crimes of heinous nature (murder, rape, molestation). Inspiration can be taken from the *DNA Fingerprint Act of 2005* passed by the US legislature
- Introducing laws that treat DNA evidence as primary evidence rather than corroboratory evidence, under the present legal arrangement in Pakistan (see discussion below for further details).
- Creation of forensic labs within major prisons to collect DNA from offenders.

ABOUT THE AUTHORS



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