

**GeneWatch UK comments on: THE DNA TECHNOLOGY (USE AND APPLICATION)
REGULATION BILL, 2019**

October 2019

GeneWatch UK is a participant in the Forensic Genetics Policy Initiative (FGPI). FGPI maintains a website¹ and a wiki of national and international policies, debates and laws regarding forensic DNA databases². GeneWatch UK has provided expert evidence on DNA databases to the European Court of Human Rights and to the British Parliament. GeneWatch UK and the Council for Responsible Genetics visited India in September 2012 to discuss the issues raised by an earlier draft of the Human DNA Profiling Bill, and we have previously submitted written comments on other versions of the Bill.

We welcome the opportunity to input to this consultation.

Although DNA can be an important tool in solving crimes, it is important that there are safeguards to protect human rights and prevent miscarriages of justice. Further, creating large databases is often not a cost-effective way to solve more crimes, and limited resources must be targeted effectively.

The Forensic Genetics Policy Initiative published its report ‘Establishing Best Practice for Forensic DNA Databases’ after extensive consultation and a review of policies worldwide.³ A comparison with India’s DNA Bill reveals a number of important issues, which are discussed further below.

1. The multiple roles of the “DNA Regulatory Board” need to be separated and more clearly defined

There is a fundamental conflict of interest between the proposed role of the Board as manager of the database and as a regulator of forensic services and other aspects of the proposed uses and applications of DNA (including ethical and privacy aspects).

Article 27(3) of Chapter V (DNA Data Bank) states that the Director of the National DNA Data Bank “*shall function under the supervision and control of the Board*”. This in effect gives the Board oversight of management of the database, in a similar manner to bodies in other countries, such as that National DNA Database Strategy Board in the UK. Such oversight boards are important for the governance of DNA databases, helping to ensure that they contribute effectively to the criminal justice system and meet ethical and regulatory requirements, with a view to maintaining public trust and political accountability. However, this management and governance role is confused with multiple regulatory roles by the articles in Chapter II (DNA Regulatory Board). This has the effect of removing the decisions of the Board from proper independent scrutiny and limiting the rights of people to object to its decisions.

¹ <http://dnapolicyinitiative.org/>

² http://dnapolicyinitiative.org/wiki/index.php?title=Main_Page

³ Available on: <http://dnapolicyinitiative.org/report/>

For comparison, for example, in the UK, the National DNA Database (NDNAD) Strategy Board, which oversees the UK database, is scrutinised by the NDNAD Ethics Board⁴, the Biometrics Commissioner⁵, the Forensic Regulator⁶, and the Information Commissioners Office⁷ (ICO). The Ethics Group provides independent advice on ethical issues surrounding the operations of the database to ministers and the NDNAD Board. The Forensic Regulator monitors compliance with quality assurance standards, investigates errors and prepares guidance on issues such as the avoidance of contamination (which can lead to miscarriages of justice). Importantly, this role extends not just to laboratories but also to the collection of crime scene samples by the police (where many errors and mix-ups can occur). The Biometrics Commissioner's role is to keep under review the retention and use by the police of DNA samples, DNA profiles and fingerprints: monitoring, for example, whether biological samples are DNA profiles are being destroyed and removed from the database when the law requires. The ICO ensures compliance with data protection (privacy) law, and provides access to an independent mechanism for complaints from individuals about breaches of their privacy.

In India's Bill, these multiple roles are rolled into one body, chaired by the Secretary to the Government of India in the Department of Biotechnology. This proposed board, whilst named the DNA Regulatory Board, is in effect also the management board for the database itself (through its role as defined in Article 27(3)). Importantly, the Board's decisions are removed from judicial scrutiny by Article 57, which states that *"No court shall have jurisdiction to entertain any suit or proceeding in respect of any matter which the Board is empowered by or under this Act to determine"*.

In addition to the conflict between the management/governance role and the board's role as a regulator, potential for conflicts of interest arise because the biotechnology department may see its role as facilitating the expansion of biotechnology, rather than delivering a cost-effective justice system. Further, trust in the proposed DNA database will be undermined by clauses in the Bill which allow the Government or Board to remove certain safeguards. These are included in the powers for the Central Government to make rules (Article 58) and the powers for the Board to make regulations (Article 59). The problematic parts of Article 58 are 58(1)(c) (which includes powers to co-operate with foreign states) (d) (allowing other functions of the Board) and (k) (covering "any other matter"). The problematic parts of Article 59 are 59(2)(b) (and associated Article 12(h) allowing "other relevant purposes"), (m) (the powers and duties of the Director under Article 27(4)), (r) (other criteria for the entry, retention and expunction of any DNA profile under Article 31(4)), (s) (the other purposes for which information to DNA samples, profiles and records will be made available, under Article 34(f)), and (v) ("any other matter").

To be consistent with best practice we recommend that:

- The management and regulatory roles of the Board are separated;

⁴ <https://www.gov.uk/government/organisations/national-dna-database-ethics-group>

⁵ <https://www.gov.uk/government/organisations/biometrics-commissioner>

⁶ <https://www.gov.uk/government/organisations/forensic-science-regulator>

⁷ <https://ico.org.uk/action-weve-taken/audits-advisory-visits-and-overview-reports/national-dna-database-delivery-unit/>

- The management role is led by a relevant department with an interest in ensuring cost-effective operation of the database within the justice system;
- A forensic regulator is established with powers to scrutinise DNA sample collection from crime scenes as well as the role of laboratories;
- A mechanism is established to provide independent scrutiny of the proposals to destroy biological samples and remove DNA profiles from the database (which are an important part of privacy protections, and play a key role in maintaining public trust);
- Privacy rights are also protected via an independent mechanism, established in law.
- An independent ethics body is established to provide advice to the Board.
- Conflicts-of-interest are published for each Board member when appointed and updated on an ongoing basis and Board proceedings are also published.
- Provisions which give the Government or Board the power to amend aspects of the safeguards in the Bill are deleted.

2. Uses of the data need to be more effectively constrained

2.1 The use of the DNA database for civil disputes should be prohibited

Article 34(e) defines one purpose of the DNA database as “*investigation relating to civil disputes or other civil matters or offences or cases specified in the Schedule, by making such information available to the concerned parties with the approval of the court, or to the concerned authority*”. This is one of the most worrying aspects of the Bill, since it implies that persons involved in a civil dispute (for example, about paternity) should have their DNA profiles added to the proposed DNA database. There is no justification for this, which is a serious interference with human rights. Whilst DNA may be required in such civil cases, the samples and DNA profiles collected are only of relevance to the specific case before the courts and not to any future criminal cases. Therefore, there is no justification for entering or retaining these DNA profiles on the database.

To be consistent with best practice we recommend that Article 34(e) and the Schedule are deleted from the Bill.

2.2 Expansion of the purposes of the DNA database by the Board should not be allowed

Article 34(f) undermines the purpose of Article 34, which is to protect human rights by limiting the purposes for which the DNA Data Bank may be used. Threats to human rights occur if the state or others use the database for purposes such as surveillance (tracking individuals or identifying and tracking their relatives using DNA, even when they are not suspected of involvement in a criminal offence) or exposing non-paternity within families. If the database is misused to identify people’s relatives (including non-paternity) in future, the potential impacts could be very serious. Impacts could include excessive surveillance to track individuals and their relatives, leading to potential human rights abuses (e.g. identifying who attended a political meeting and who they are related to); or illegal access by

criminals – or corrupt officials/police - who want to misuse this information e.g. for blackmail regarding non-paternity. Allowing the Board to expand the purposes at will prevents Article 34 from acting as an important safeguard, and risks a major loss of public trust.

To be consistent with best practice we recommend that Article 34(f) is deleted (along with the associated Article 59(2)(s)).

2.3 International data sharing should require safeguards

Article 30 allows the sharing of DNA profiles, and information regarding matches and the identification of suspects and missing persons, to be shared internationally. However, best practice requires the provisions of relevant safeguards in both countries involved. In particular, data should be transferred overseas only when it is necessary and proportionate to do so, for the purpose for which it was originally collected, and best practice standards must apply in both countries. For example, if a person's DNA profile is required to be deleted in the country of origin if they are acquitted, or after a certain period of time, this must also be required in the receiving one. Quality assurance standards must also apply.

To comply with best practice, the Bill should specify minimum technical and human rights standards that must be met before any international exchange of DNA profiles or associated information takes place.

3. Further restrictions and safeguards are needed regarding the collection and retention of samples and data

3.1 DNA profiles should be restricted to identifying information only

DNA profiling can be restricted so that it uses only non-coding DNA, a commonly used international standard (leading to the storage of 'forensic DNA profiles', based on parts of the DNA, called loci, where the chemical letters of the DNA have multiple repeats). This prevents the use of parts of the DNA which code for personal characteristics, including medical conditions. For example, Ireland's law states⁸ : *"DNA profile", in relation to a person, means information comprising a set of identification characteristics of the non-coding part of DNA derived from an examination and analysis of a sample of biological material that is clearly identifiable as relating to the person and that is capable of comparison with similar information derived from an examination and analysis of another sample of biological material for the purpose of determining whether or not that other sample could relate to that person..."* (Article 2).

To be consistent with best practice, the definition of a DNA profile in Article 2(1)(viii) Bill should be amended to restrict such DNA profiles to non-coding DNA, in order to

⁸ Criminal Justice (Forensic Evidence and DNA Database System) Act 2014. Ireland.
<http://www.oireachtas.ie/documents/bills28/acts/2014/a1114.pdf>

explicitly prevent the storage of other private genetic information, such as that relating to medical conditions.

3.2 More information and public consultation regarding restrictions on the collection of DNA from suspects without consent

The Bill allows two main categories of persons to have their DNA collected without consent and their DNA profiles added to the database (Article 21). These are persons suspected of any offence, where an order is made by a magistrate, plus persons suspected of more serious offences (any offence punishable with death or imprisonment for a term exceeding seven years), where an order from a magistrate is not required.

There is no international consensus on when DNA can be collected from suspects and convicted persons, but important safeguards include:

- Restricting the categories of crimes for which DNA can be taken to more serious crimes, specified in legislation, for which DNA evidence is likely to be relevant;
- Requiring evidence of “probable cause” that the suspect committed the crime and some independent oversight of this, for example a decision by a court;
- Requiring automatic removal of the records of suspects who are acquitted or not charged from the DNA database, so that innocent people’s records do not continue to be stored (discussed further below).

In many (but not all) countries a decision by a court is regarded as an essential protection for the rights of suspects. In most countries there are restrictions on the types of offences for which DNA may be collected, so that persons arrested for minor offences are not included on the DNA database. If safeguards are inadequate, there is a risk that persons may be arrested simply to include them on the database.

Defining the relevant categories of crimes requires public consultation and debate, taking account of the need to balance crime detection and prevention with protection of individual privacy and other rights, as well as issues of cost-effectiveness and optimal use of police resources.

Best practice requires greater public consultation and debate regarding whose DNA profiles should be added to the DNA database without consent, informed by the cost-benefit analysis recommended in Section 4 below. In addition, the term “suspect” should be defined in the Bill (for example, as a person arrested and detained by the police in connection with certain offences), to prevent arbitrary sampling of people’s DNA (for example, on the street).

3.3 Need for informed consent and different treatment for volunteers

The Bill allows DNA to be taken from some persons who are not suspects, for example victims of a crime, with their consent. It is important that the Bill includes this because taking the DNA of victims or others can play a role in solving crimes, but

they are not criminals or suspects. However, there are some problems with the way consent is dealt with in the Bill.

Firstly, the term “informed consent” should be used, consistent with international instruments such as the Declaration of Helsinki.⁹ This is because giving consent requires information, so that volunteers can make an informed decision.

Secondly, there are problems with the way the Bill deals with persons who lack capacity to make their own decisions. And thirdly, the Bill allows refusal of consent to be overruled. Article 23 includes this paragraph:

“Provided that before collecting bodily substances for DNA testing of a victim or a person reasonably suspected of being a victim who is alive, or a relative of a missing person, or a minor or a disabled person, written consent of such victim or such relative or the parent or guardian of such minor or disabled person shall be obtained and, in case of refusal, the person investigating the case may make an application to the Magistrate having jurisdiction, for obtaining such bodily substances and the Magistrate, if he is satisfied that there is reasonable cause for taking the bodily substances from such person, order for taking of bodily substances from that person”.

The first problem here is the use of the term “disabled person”. What is meant here is “person physically or mentally incapable of giving consent”, a much smaller category of persons. The term “disabled person” is also used incorrectly in Article 31(3). This undermines the rights of disabled persons.

The second problem is that this paragraph allows a magistrate to overrule the consent of a person (or their representative), thus rendering the requirement for consent entirely meaningless. The effect of this is to allow persons who should be volunteers (such as victims) to have their DNA collected and their DNA profiles stored on a database without their consent. This is inconsistent with international standards and is a breach of human rights. Similarly, Article 22(2) also allows refusal of consent to be over-ruled, in the case of minors.

Finally, best practice internationally is not to load volunteers’ DNA profiles onto a database at all, but to use them only in the context of the specific investigation for which they have been collected. This means a victim’s DNA profile, for example, can be compared with DNA in blood on a suspect’s clothing, but will not be searched against the entire database for matches (which, in effect, treats the volunteer as a suspect for many different crimes).

In the UK, the National DNA Database Ethics Group recommended in 2008 that volunteers’ DNA profiles should not be loaded on to the DNA database and that all information and material should be destroyed after they are used. The Ethics Group found: *“Importantly, the work presented to the DNA Strategy Board illustrated that*

⁹ WMA Declaration of Helsinki - Ethical Principles for Medical Research Involving Human Subjects. <https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/>

DNA matches between volunteer profiles and crime stains are satisfactorily achievable irrespective of whether or not the volunteer profiles are loaded from the analysing laboratory to the NDNAD [National DNA Database]. With the exception of sex offenders (who are sometimes sampled under the volunteer procedure), on the results to date, all of the matches useful to the police would have been obtained without speculative searching of the NDNAD. There would therefore be no loss to operational policing if, for the majority of crimes, volunteer samples were not loaded onto the NDNAD and were used only in relation to the investigation of the crime for which they were obtained.”¹⁰ As a result, in the UK: “It has decided that in future, volunteers who consent to provide a DNA sample for elimination purposes should no longer be asked to provide consent for their profile to be loaded to the NDNAD and these profiles will not be loaded”.¹¹ US Federal law also states that DNA samples that are voluntarily submitted solely for elimination purposes shall not be included in the National DNA Index System.¹²

The advantages of this approach are that it does not pose unnecessary risks to the privacy of volunteers, or expose them to potential miscarriages of justice if their profile is wrongly matched with a crime scene DNA profile in the future. Thus, it helps to maintain public trust in police use of DNA and encourages people to agree to help the police with their investigations when it is directly relevant for them to provide their DNA.

To be consistent with international best practice we recommend that:

- The term “consent” is replaced with “informed consent” throughout the Bill;
- The term “disabled person” is replaced with “person physically or mentally incapable of giving consent”;
- The wording “and, in the case of refusal...” (to the end of the paragraph) is deleted from Article 23, and Article 22(2) is also deleted.
- Volunteers’ DNA profiles are not loaded onto the DNA database, but used only in the specific criminal investigation for which they have been collected. (Note: volunteers who are relatives of missing persons are considered separately in Section 3.6).

3.4 Removal of DNA profiles

The Bill makes provision for the removal of DNA profiles from the DNA Databank. This is important to protect the rights of individuals, particularly people who have been identified as suspects but subsequently not convicted of any crime. However, some improvements are needed to these provisions to ensure they work in practice.

¹⁰ NDNAD Ethics Group: annual report 2008, Paragraph 5.4:
http://www.homeoffice.gov.uk/publications/agencies-public-bodies/fsr/NDNAD_Ethics_Group_Annual_Report?view=Binary

¹¹ UK Home Office (2013) Biennial report 2009 to 2011: National DNA Database. Paragraph 2.9.
<https://www.gov.uk/government/publications/ndnad-biennial-report-2009-to-2011>

¹² 42 U.S. Code § 14132 - Index to facilitate law enforcement exchange of DNA identification information.
<https://www.law.cornell.edu/uscode/text/42/14132>

Article 31(2) states: *“The Director of the National DNA Data Bank shall remove from the DNA Data Bank the DNA profile,—*
(i) of a suspect, after the filing of the police report under the statutory provisions or as per the order of the court;
(ii) of an undertrial, as per the order of the court,
under intimation to him, in such manner as may be specified by regulations”.

However, the effectiveness of the proposed removals process is unclear as it does not clearly specify that the retention of a DNA profile is unlawful after a case is dropped or a person is acquitted. Nor does it allow for any independent oversight of whether the necessary orders of a court have actually been made or implemented. In addition, individuals should have a right to obtain information regarding whether their DNA profile is held and petition for its removal, with a right to appeal to an independent body. For example, in the UK, the overall implementation of the removals policy is scrutinised by the independent Biometrics Commissioner, and individuals may seek information and deletion of their DNA profiles via the Data Protection Act, with a right of appeal to the Information Commissioner.

Persons convicted of offences that are not “specified offences” should also be entitled to have their DNA profile automatically expunged after a fixed time period, as the indefinite retention of their DNA profiles is disproportionate to the need to tackle crime.

Article 31(3) allows for the removal of volunteers’ DNA profiles on written request. However, we recommend that volunteers involved in criminal investigations do not have their DNA profiles loaded onto the DNA database in the first place (see Section 3.3) and that a mechanism is added to ensure the automatic removal of DNA profiles on the missing persons’ database at the end of an investigation (see Section 3.6).

To comply with best practice, we recommend that:

- The Bill is amended to specify that the retention of a DNA profile after a case is dropped or a person is acquitted is unlawful;
- An independent oversight mechanism is put in place to assess whether the removals process is working, and to publish annual reports on this.
- Individuals are given a right in law to obtain information regarding whether their DNA profile is held and to petition for its removal, with a right to appeal to an independent body;
- Provisions are added such that persons convicted of offences that are not “specified offences” are also entitled to have their DNA profile automatically expunged after a fixed time period.

3.5 Destruction of samples

Article 20(2) specifies that:

“The DNA laboratory shall, after deriving the DNA profile and depositing it with the DNA Data Bank,—

(a) return the biological sample or remaining material for its preservation to the investigating officer in a criminal case till the disposal of the case or the order of the court; and
(b) in all other cases, destroy the biological sample or remaining material and intimate the person concerned."

This is a welcome and important safeguard to protect privacy, since biological samples contain further private genetic information (such as information about health conditions) that should not be revealed. However, no oversight mechanism is provided in the Bill to check this process is working in practice (in the UK, the Biometrics Commissioner performs this role). Also, the wording is not explicit that it is unlawful to retain samples from suspects after the disposal of the case.

To be consistent with best practice, we recommend that:

- an independent body has oversight over whether biological samples are being destroyed in accordance with the legislation;
- the Bill makes it explicit that it is unlawful to retain samples from suspects after the disposal of the case.

3.6 The missing persons' DNA database should be separate from the criminal DNA database

The Bill seeks to establish a DNA Data Bank with a number of indices, including a missing persons index. According to Article 2(1) (xvi), *"missing persons' index" means a list of entries of DNA profiles, in a DNA Data Bank, derived from—*
(a) unidentified human remains; or
(b) the personal effects of persons who are missing; or
(c) the bodily substances of relatives of the missing persons".

Legislation on forensic DNA databases often includes a role for DNA databases in identifying missing persons or body parts. Normally, this process requires DNA from relatives, so that the unknown DNA profile can be compared to look for a partial match. In other cases, DNA may be available from the person who has been reported missing (for example, from their toothbrush). However, care must be taken to ensure that missing persons and their relatives have their rights protected: they are not criminals or suspects.

One concern is that no definition of a "missing person" has been included in the Bill. For example, Ireland uses the following definition¹³: *"missing person" means a person who, whether before or after the commencement of this section, is observed to be missing from his or her normal patterns of life, in relation to whom those persons who are likely to have heard from the person are unaware of the whereabouts of the person and that the circumstances of the person being missing raises concerns for his or her safety and well-being".* Without a definition, the state

¹³ Criminal Justice (Forensic Evidence and DNA Database System) Act 2014. Ireland.
<http://www.oireachtas.ie/documents/bills28/acts/2014/a1114.pdf>

could use the missing person's database or index to track persons of interest (such as political opponents) in circumstances where a person has moved to an unknown location but there are no concerns for their safety or well-being.

In addition, best practice includes storing DNA profiles from missing persons and their relatives in databases that are kept separately from criminal DNA databases and restricting searches to finding the missing person, not seeking to identify matches with DNA profiles from crime scenes. For example, in the UK: *"In certain circumstances, volunteer samples may also be requested from individuals, together with consent for the resulting profile to be searched and retained on a DNA database. Such samples are only requested in a relatively small number of cases, for example, in missing persons enquiries and from potential vulnerable persons. Where consent to retention is also provided, these volunteer profiles will be loaded to the Missing Persons DNA Database (MPDD) or the Vulnerable Persons Database (VPDD)."* (para 2.10).¹⁴ An important advantage of keeping these databases separate from other DNA databases is to reassure relatives of missing persons that the use of their stored profiles will be restricted to searching for their missing relative. Fully informed consent should be required from relatives as such searches are a voluntary process. An exception can be made for unidentified bodies or body parts, where a search against a criminal DNA database may be useful for identification purposes.

Article 29(1) rightly restricts comparison of the missing persons' index, so that no comparison shall be made of it with the DNA profiles in the offenders' index or suspects' index or undertrials' index maintained in the DNA Data Bank. However, comparisons with the crime scene index (containing DNA profiles from crime scenes) are allowed.

Article 31(3) allows for the deletion of DNA profiles on request, but this should also occur automatically at the end of an investigation.

To be consistent with best practice, we recommend that:

- A separate Missing Persons' DNA database is set up, rather than merely a different index in the criminal DNA Databank;
- Comparisons of DNA profiles in this database and profiles on the criminal DNA database (including in the crime scene index) are not allowed;
- A definition of "missing person" is included in the Bill;
- Provisions are made to automatically delete the DNA profiles of the missing person and his/her relatives at the end of an investigation.

3.7 Forensic regulation is an important safeguard which needs to be extended beyond laboratory quality assurance

Using DNA effectively during criminal investigations requires proper crime scene examination in a context of trained and reliable policing, a trusted chain of custody

¹⁴ UK Home Office (2013) Biennial report 2009 to 2011: National DNA Database. <https://www.gov.uk/government/publications/ndnad-biennial-report-2009-to-2011>

of samples, reliable analysis, and proper use of expert evidence in court. Without these prerequisites, a DNA database will exacerbate rather than solve problems in the criminal justice system: for example, by leading to miscarriages of justice through false matches or misinterpretation or planting of evidence, and diverting resources from more important priorities. One of the main risks is that DNA evidence becomes contaminated with DNA from another source, and the wrong person is arrested or convicted as a result. Whilst the Bill includes important provisions requiring the accreditation of laboratories (Chapter III), it is silent on the issue of crime scene analysis and the chain of custody from the crime scene to the lab.

Article 24 states: *“If the trial court is satisfied with the plea of the accused person that the bodily substances taken from such person or collected from the place of occurrence of crime had been contaminated, the court may direct the taking of fresh bodily substances for re-examination”*. However, it is unclear how an accused person might become aware that their sample, or those from the crime scene, have been contaminated, or obtain evidence of this to convince the court. Laboratories and police should be obliged to notify the accused, if they have reason to believe contamination has occurred. Individuals can always be resampled but if crime scene evidence is contaminated resampling may not be possible. This reinforces the need for additional provisions to implement quality assurance at the crime scene and en-route from the crime scene to the lab.

To be consistent with best practice, we recommend that:

- the Bill is revised to create an independent forensic regulator, which can regulate crime scene examination and the chain of custody prior to the analysis of samples, as well as laboratory quality assurance;
- the Bill is amended so that laboratories and police are obliged to notify the accused, if they have reason to believe contamination has occurred.

4. Need for a relevant privacy or data protection act

Many of the recommendations above rely on greater independent scrutiny, which would be facilitated by the prior adoption of specific legislation on privacy or data protection. This would provide a mechanism for individuals to enforce their rights and also for the provisions on protection of information (Chapter VI) to be independently regulated and enforced.

To comply with best practice, a relevant privacy or data protection law is needed.

5. A more realistic financial memo is needed, including a full cost-benefit analysis

The expenditure provided in the financial memo is inadequate to pay for the establishment and running of the proposed databases. For comparison, the UK National DNA database cost £3.7 million pounds (approximately 338 million rupees)

to run in 2015-16.¹⁵ (A more recent figure provided for 2017-18 was £1.54 million, but this does not include IT costs¹⁶).

A proper cost-benefit analysis is needed.

Lobbyists can provide an exaggerated view of the potential benefits of DNA databases. For example, in Brazil, lobbyists from Gordon Thomas Honeywell, acting for the DNA testing industry, claimed that 3,000 stranger rapes a year are solved using the UK DNA database.¹⁷ In reality, there were 29,265 rapes recorded by the police in England and Wales¹⁸ in 2014-15, but only 192 of these led to matches on the DNA database with outcomes counted by the police (these include cases that have gone to court, but also cases where there are difficulties with evidence and the case does not go to court).¹⁹ Not all of the matches will have identified a stranger who committed a rape: in many cases they confirm intercourse with a man who has already been identified by the victim, where the DNA database does not play an important role. And not all these suspects will be convicted if the suspect claims that intercourse was consensual. An estimated 5% to 25% of rapes may be stranger rapes²⁰. So, in reality, only a handful of stranger rapes a year are likely to be solved using the UK DNA database, despite it being the largest DNA database per head of population in the world. In total, 8.5% of reported rape cases went to court in 2014/15 (2,488 cases), so the DNA database plays a relatively small role.²¹

The benefits of a DNA database are driven largely by the number of *crime scene* DNA profiles collected, not by the number of individuals' DNA profiles.²² In the USA, the Urban Institute found that for every 1,000 offender profiles uploaded to the DNA database, 8 investigations were aided, whereas for every 1,000 crime scene DNA profiles uploaded, 407 investigations were aided²³. Thus, it is important to prioritise

¹⁵ National DNA Database Strategy Board Annual Report 2015/16.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/594185/58714_Un-Num_Nat_DNA_DB_Accessible.pdf

¹⁶ National DNA Database Strategy Board Annual Report 2017/18.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/778065/National_DNA_Database_annual_report_2017-18_print.pdf

¹⁷ [http://www.dnaresource.com/documents/BRAZILBrasiliaJuly2010\(2\).pdf](http://www.dnaresource.com/documents/BRAZILBrasiliaJuly2010(2).pdf)

¹⁸ Note: Scotland and Northern Ireland have separate DNA databases, and only export DNA profiles to the UK database when the crimes have not been solved.

¹⁹ Table 4. National DNA Database Strategy Board Annual Report 2014/15.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/484937/52921_NPCC_National_DNA_Database_web_pdf.pdf

²⁰ Criminal Justice Joint Inspection (2012) Forging the links: Rape investigation and prosecution

A joint review by HMIC and HMCPsi. February 2012. ISBN: 978-1-84987-688-9.

<http://www.hmic.gov.uk/media/forging-the-links-rape-investigation-and-prosecution-20120228.pdf>

²¹ Table 2.3. Crime Outcomes in England and Wales 2014/15.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/445753/hosb0115.pdf

²² Wallace HM, Jackson AR, Gruber J, Thibedeau AD (2014) Forensic DNA databases—Ethical and legal standards: A global review. *Egyptian Journal of Forensic Sciences*, **4**(3), 57–63.

<http://doi.org/10.1016/j.ejfs.2014.04.002>

²³ Samuels JE, Davies EH, Pope DB. Collecting DNA at arrest: policies, practices, and implications. The Urban Institute. Final Technical Report. Washington, May 2013. <http://www.urban.org/UploadedPDF/412831-Collecting-DNA-at-Arrest-Policies-Practices-and-Implications-Report.pdf>

the collection of DNA profiles from crime scenes, rather than from individuals. Collection and analysis of DNA can be expensive: Article 20(j) allows a DNA laboratory to “charge such fees for conducting DNA testing or any other procedure relating thereto, not exceeding twenty-five thousand rupees” (this does not include the costs of police time or IT services related to setting up and maintaining the database itself).

The financial memo should provide a breakdown of costs, based on prices for establishing and maintaining the proposed computer database and collecting and analysing the samples. Issues that need to be considered as part of establishing the costs are: (i) the likely numbers of profiles to be taken each year (including how many crime scene profiles, and whether clause 21 needs to be amended to reduce the number of individuals’ profiles added annually); (ii) the number of loci (places in the genetic sequence) that need to be analysed to avoid false matches (taking account of the size of India’s population, relatedness due to large families, and the inclusion of international sharing in the Bill); (iii) the need for substantial prior investment to ensure that crime scene examination, and the custody chain from scene to lab, meet adequate standards (bearing in mind that failure to address this could lead to many miscarriages of justice).

To be consistent with best practice, a detailed analysis of costs and a realistic appraisal of potential benefits are needed.

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