

ANZPAA
Australia New Zealand
Policing Advisory Agency



NATIONAL INSTITUTE OF FORENSIC SCIENCE

Annual Report 2019–20



Our Strategic Intent

Promote and Facilitate Excellence in Forensic Science

The National Institute of Forensic Science is a directorate within the Australia New Zealand Policing Advisory Agency (ANZPAA)

On behalf of the Australia New Zealand Policing Advisory Agency National Institute of Forensic Science (ANZPAA NIFS) and the Australia New Zealand Forensic Executive Committee (ANZFEC), we are proud to release the *ANZPAA NIFS Annual Report 2019-20*.

In these unusual times ANZPAA NIFS has been able to achieve key milestones in the priority areas as outlined in the *ANZPAA NIFS Business Plan 2019-20*. We were excited to provide value to our stakeholder through these achievements.

Highlights of our work include the development of a Workflow Mapping Framework, which was applied to the fingerprint discipline, resulting in the identification of workflow efficiencies and improved utilisation of resources. We also supported the continuous improvement of forensic science through the Forensic Fundamentals project and a review of the underpinning science for the gunshot residue analysis, bloodstain pattern analysis and toxicology disciplines. The review also identified areas for further research which will be incorporated into our annual list of research questions as part of our Research and Innovation Roadmap.

In collaboration with our stakeholders, a guideline for Case Record Review in Forensic Biology and a Model for Transitioning Technology from the Laboratory to the Field were delivered. The AFSAB Enhancement Project was progressed, with improvements to the certification process including new assessments and a records management database.

A significant achievement was the provision of rapid advice regarding the unfolding COVID-19 pandemic. This shared learnings to better utilise resources to respond to the changing environment. The impact of the pandemic changed many aspects of the way ANZPAA NIFS delivered the work program including a move to virtual meetings and project development. We are pleased to share this Annual Report with you.

Katherine Van Gorp
Chief Executive Officer, ANZPAA

Dr Linzi Wilson-Wilde OAM
Director, NIFS

Co-ordination

Builds current jurisdictional and cross-jurisdictional operational capability and effectiveness through protocols, products and enhanced implementation support.

Process Mapping Fingerprints

- Delivered a framework to facilitate the future workflow mapping of other forensic disciplines.
- Provided latent and tenprint workflow maps to each ANZFEC policing agency that identified common bottleneck points and workflow variations across agencies.
- Provided recommendations that have the potential to identify workflow efficiencies resulting in better utilisation of resources and reduced cost.

Forensic Fundamentals

- Completed the assessment of gunshot residue analysis, bloodstain pattern analysis and toxicology (analytical methodology and alcohol analysis components) to reduce the risk to forensic science service providers by providing a greater visibility of the underpinning science behind these forensic science disciplines, and proactively identify areas for further research and empirical testing.
- Published *Empirical Study Design in Forensic Science* which supports the continuous improvement of forensic science and its application in the criminal justice system, and provides a tool to assess existing empirical studies or design new ones to demonstrate the validity of forensic science methods or opinions.

National Familial DNA Searching Policy

- Progressed a review of the *National Policy Cross-Jurisdictional Familial DNA Searching for the Investigation of Crime in Australia*, to facilitate cross jurisdictional familial DNA searching and reduce risk by ensuring appropriate common practice between the jurisdictions.

Case Record Review in Forensic Biology

- Published *Case Record Review in Forensic Biology* to assist in addressing an identified gap in understanding in the forensic community in relation to the implementation of a risk-based approach as part of new accreditation requirements.

Australia New Zealand Forensic Executive Committee (ANZFEC)

3 ANZFEC meetings held with representatives from government forensic science service providers across Australia and New Zealand.

3 ANZFEC virtual meetings held to share experiences on maintaining forensic operations and keeping employees safe in the COVID-19 environment.

ANZPAA Disaster Victim Identification Committee (ADVIC)

- Provided opportunities for DVI capability and training development by facilitating an annual meeting and communication pathway.

Innovation

Contributes to a creative and innovative forensic science body of knowledge and enhances the way we assess, adopt and implement new forensic capabilities and tools.



Model for Transitioning Technology from the Laboratory to the Field

- Provided a standardised and streamlined approach to transitioning laboratory-based technology to the field for use by Australia and New Zealand forensic agencies.



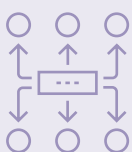
Forecasting Advice

- Provided ANZFEC with a preliminary assessment of artificial intelligence in forensic science.
- Facilitated dedicated ANZFEC meetings to share information regarding the emerging COVID-19 environment and provided rapid advice regarding the unfolding COVID-19 pandemic to assist ANZFEC agencies to share learnings, reduce duplication of effort, and prepare for changes in the working environments and service delivery.



ANZPAA NIFS Best Paper Awards

- Managed the delivery of the 2019 ANZPAA NIFS Best Paper Awards to promote collaboration and engagement in research that is operationally relevant.



Research and Innovation Roadmap

- Released the *2020 Annual Projects* document to assist in the targeting of research and innovation initiatives towards operationally relevant areas, to increase the efficiency and effectiveness of forensic science service provision.



Information Management

Promotes and facilitates information-sharing and cross-jurisdictional dialogue and events.

Specialist Advisory Groups (SAGs)

10 Face-to-face meetings of the SAGs facilitated to provide discipline specific technical advice and opportunities for capability development.

31 Virtual meetings of the SAGs and associated advisory/working groups facilitated to assist the delivery of action plan items.

Chemical Warfare Agent Laboratory Network (CWALN)

- Facilitated a CWALN meeting and conducted a multiagency collaborative testing exercise to support the continuous development of best practice for presumptive identification of chemical warfare agents and related chemicals in low risk samples.

ANZPAA NIFS Secure Server

- Maintained and contributed to the development of the ANZPAA NIFS Secure Server as an information sharing resource for forensic stakeholders, ensuring a valuable channel of communication to and between agencies.

ANZPAA NIFS Website (www.anzpaa.org.au/nifs)

2,599 Average visitors each month from over 70 countries.

NIFS Twitter Account (@NIFS_ANZ)

468 Twitter followers and growing, with over 84K views of ANZPAA NIFS tweets during the year.

The Forensic Exhibit Newsletter

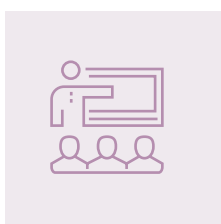
4 Newsletters published to communicate and increase awareness of the work of the Australia New Zealand forensic science community.

Education and Training

Maximises opportunities for forensic science skills and knowledge development.

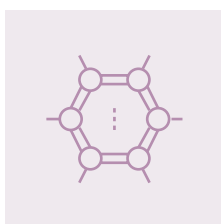
Forensic Science Workshops

3 Forensic science workshops facilitated to increase training opportunities for forensic science practitioners.



Development of a Training Package Covering Fingerprint Distortion Analysis, Comparison and Reporting – Canberra, August 2019

Fingerprint Specialist Advisory Group



Interpretation of Glass Evidence using Bayesian and Chemometric Approaches – Melbourne, September 2019

Chemical Criminalistics Specialist Advisory Group



Progressing Trace Evidence to Activity Level Interpretation and Reporting – Adelaide, February 2020

Drug Specialist Advisory Group

Quality

Delivers quality assurance programs, develops standards and manages the practitioner certification program.

Australasian Forensic Science Assessment Body (AFSAB)

AFSAB Enhancement Project

- Developed Written Assessment Material to increase assessment randomisation across candidates.
- Ground Truth Known Fingerprint Material collected enabling the development of new Practical Assessments for the Fingerprint discipline.
- AFSAB records management database development commenced in-house, saving significant upfront and ongoing costs.

New Certifications

28

New candidates engaged in the AFSAB assessment process.

Annual Recertifications

90 263 31

Crime Scene Fingerprints Firearms

After the Fact (AtF)

462

Number of AtF proficiency tests delivered.

\$93k⁺

In savings to Australian forensic science agencies.

Proficiency Tests

\$70k⁺

In savings to forensic agencies through the co-ordinated procurement of proficiency tests.

308

Proficiency tests purchased on behalf of forensic agencies.

Development and Review of Australian and International Standards for Forensic Science

- Took a lead role in influencing international standard drafts and reviewing current Australian standards in forensic analysis to reduce risk and improve quality requirements for forensic science.
- Chaired meetings of the international technical committee responsible for the development of core standards in forensic science, resulting in the publication of vocabulary and collection standards and preparation of draft standards for analysis, interpretation and reporting.

National Association of Testing Authorities (NATA) Forensic Science Accreditation Advisory Committee (FSAAC)

- Provided advice from a cross-agency perspective on the application and revision of criteria for the NATA forensic science accreditation program.

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T: +61 3 9628 7211

E: secretariat.support@anzpaa.org.au

W: anzpaa.org.au/nifs

TW: [@NIFS_ANZ](https://twitter.com/NIFS_ANZ)

Acknowledgements

ANZPAA acknowledges Aboriginal and Torres Strait Islanders are Australia's first peoples and the traditional owners and custodians of the land on which we work. ANZPAA is committed to fulfilling the principles of New Zealand's founding document The Treaty of Waitangi (Tiriti o Waitangi). Central to the principles is a common understanding that all parties will relate and participate with each other in good faith with mutual respect, co-operation and trust.

This Annual Report is the direct result of the hard work and collaboration of the ANZPAA NIFS and ANZPAA teams and the generous forensic stakeholders who provided important input and feedback.

Cover Image

- Queensland Police Service

Photos courtesy of:

- Queensland Police Service
- South Australia Police