Interim Statement of Core Purpose for the New Zealand Institute for Public Health and Forensic Science

Purpose

Our purpose is to enhance and protect New Zealand's public health and justice systems to support economic growth and resilience, innovation, improved health, safety and security for people and communities.

Outcomes

We will fulfil our purpose through science leadership, provision of research that impacts positively on the economy, applied science services, and the transfer of data, technology and knowledge in partnership with government, the health and justice sectors, Māori, industry and communities to:

Foster innovation and economic opportunity through the development and commercialisation of science-based innovative tools that contribute to New Zealand's resilience, productivity and economic growth, including the Māori economy

Support a resilient and growing economy by protecting and promoting the health of New Zealanders through strengthening health security through effective and timely detection, prevention and response to public health threats, including infectious diseases, pandemics and environmental hazards

Support a resilient and strong economy by enhancing public safety through enhancing the quality, reach and application of forensic science services in criminal investigations, court proceedings and crime prevention efforts

Enable science-informed policy and decision-making by delivering science service and innovation that addresses important threats to public health and justice while simultaneously supporting regulatory and governance agendas at both the national and local levels

Contribute to creating a more dynamic, effective and efficient SI&T system for New Zealand by working collaboratively, including with other CRIs and universities

Scope of Operations

To deliver on our core purpose and strategic outcomes, we lead and contribute to science that strengthens public health, justice and national resilience. Our operations span a set of integrated capabilities where we provide specialist knowledge and skills, national infrastructure and science-based services to support New Zealand's wellbeing and prosperity.

To achieve these outcomes, the New Zealand Institute for Public Health and Forensic Science will lead the following core research areas:

Health Security and Pandemic Preparedness

- Delivering surveillance, diagnostics (including reference laboratory functions) and modelling to detect, prevent and respond to infectious diseases, antimicrobial resistance and other emerging health threats affecting New Zealanders

Forensic Science and Justice Services

- Providing forensic expertise in DNA analysis, toxicology, digital forensics and scene examination to support criminal investigations, court processes and crime prevention, ensuring timely and fair justice outcomes

Drug Harm Prevention and Integrated Health-Justice Interventions

- Applying forensic and public health science to assess, monitor and reduce the harm associated with alcohol, illicit substances and synthetic drugs across both health and justice systems

Environmental Health and Risk Science

- Investigating the impact of environmental hazards on human health, including contaminants in drinking-water, groundwater and freshwater systems, as well as safe biowaste use and exposure pathways for chemical and microbial risks

Food Safety and Public Protection

- Safeguarding public health and supporting the food industry through science-based assurance of food safety and quality, delivered in partnership with regulators and industry

Science for Policy and Public Good

- Generating knowledge and tools that support the government and the wider economy, including the private sector – including scenario modelling, risk assessment and horizon scanning - to inform evidence-based policy in the health, environment and justice sectors, and emergency preparedness and national planning.

The New Zealand Institute for Public Health and Forensic Science will collaborate in the following areas:

Food Safety and Health

- Interfaces between food safety and human health, including foodborne disease and risk management, contaminants in drinking water, groundwater and freshwater systems, One Health approaches and cross-domain threats.

Climate Change

- National mitigation, adaptation and resilience, including greenhouse gas emissions and carbon cycle, impacts on biodiversity across domains, climate-health research, environmental surveillance, and community resilience strategies

Biosecurity

- Cross-domain and integrated approaches to biosecurity threats and biosystematics across environments, including pathogen detection, antimicrobial resistance monitoring, and biosafety through integrated One Health approaches

Environmental Health and Risk Science

- Investigating the impact of environmental hazards on human health, including contaminants in drinking-water, groundwater and freshwater systems, as well as safe biowaste use and exposure pathways for chemical, radiation and microbial risks

Science for Policy and Public Good

- Science for evidence-based and cross-domain policy, strategic foresight and international obligations.

Social and Systems Science Integration

- Integrated approaches to social science, community engagement and policy development; bridging biophysical and social science.

Collections and Databases

- Biosystematics, data curation, data sharing, and infrastructure.

Supercomputing and Advanced Technologies

- Digital infrastructure and data analytics including AI.
- A system-wide approach to development and use of advanced technologies, including via an Advanced Technology PRO.

Vision Mātauranga

- Enabling the innovation potential of Māori knowledge, resources and people.

Building an effective SI&T system

- Approaches to knowledge transfer, commercialisation, capability and infrastructure development