

Health, community and compensation

- 4.1 This chapter considers the Government's response to *Recommendations 3 to 6* of the JSCFADT report which called on the Government to:
- review its health advice on the human health effects of PFAS exposure, including its possible links to medical conditions (*Recommendation 3*);
 - improve participation in blood testing programs and extend this program of testing to additional areas and over time to support longitudinal analysis (*Recommendation 4*);
 - consider compensation on a priority basis to property owners and businesses most seriously affected by PFAS contamination in and near Defence bases (*Recommendation 5*); and
 - make available free individualised case management and financial counselling services to affected individuals (*Recommendation 6*).
- 4.2 These recommendations collectively aimed to provide a package of supports to address the physical, mental and financial impacts on people living in PFAS affected communities, whether on or near Defence bases.
- 4.3 The Sub-committee in this chapter evaluates the Government's response to these recommendations in the light of recent health advice, ongoing research and evidence on the impacts of PFAS on affected communities since the JSCFADT reported in December 2018.

Review of the health opinion

- 4.4 In its response, the Government formally noted *Recommendations 4 and 5*, and agreed in part to *Recommendation 6* for ongoing counselling and financial advice for PFAS affected communities.¹ These judgements also applied, the response advised, to like recommendations in the Senate report on PFAS contamination in Oakey Army Aviation Centre and other affected sites, made over four years ago.²
- 4.5 The Government agreed with the Committee's *Recommendation 3*. This recommendation called for the review of existing advice on PFAS health impacts and to clarify links between PFAS exposure and certain medical conditions.³
- 4.6 In its inquiry on management of PFAS contamination the JSCFADT had heard variously from medical and communication experts that the Australian Government's health advice was, as Dr Geralyn McCarron suggested, 'out of step with both the precautionary principle and the body of evidence linking PFAS to impairment of human health', including that acknowledged by the United States, Germany, Britain, and the International Agency on Research on Cancer.⁴
- 4.7 The then Chief Medical Officer Professor Brendan Murphy explained at hearings in September 2018 that Australia's approach was based on the view that the evidence base on the health effects of PFAS was 'weak and inconsistent', and that existing data at the time was 'certainly insufficient' to make a conclusive connection.⁵ This supported the Government's 'precautionary approach' to management of PFAS contamination in the

¹ Australian Government, *Whole of Australian Government response to the report of the JSCFADT: inquiry into the management of PFAS contamination in and around Defence bases*, Department of Agriculture, Water and Environment (DAWE), 20 February 2020 (hereafter Government response), pp. 12-17.

² Senate Foreign Affairs Defence and Trade References Committee, *Firefighting foam Contamination—Part B Army Aviation Centre Oakey and other Commonwealth, state and territory sites*, May 2016.

³ Government response, *Recommendation 3*, p. 3.

⁴ JSCFADT, *Inquiry into management of PFAS contamination in and around Defence bases*, December 2018, p. 67.

⁵ Dr Murphy is now Secretary of the Department of Health. Quote cited in JSCFADT, *Inquiry into management of PFAS contamination in and around Defence bases*, December 2018, p. 67.

shorter term, and also the need long term and larger studies to obtain conclusive evidence of any negative health effects associated with PFAS.⁶

Establishing the health opinion

4.8 Australia's PFAS health advice is based on the findings of the Expert Health Panel which had been established by government to review the scientific evidence on the potential health impacts from PFAS exposure and to identify areas for research.

4.9 In its review of 20 recent Australian and international studies the Panel had recognised 'consistent associations' with PFAS exposure and the following health effects:

- increased levels of cholesterol in the blood;
- increased levels of uric acid in the blood;
- reduced kidney function;
- alterations in some indicators of immune response;
- altered levels of thyroid hormones and sex hormones;
- later age for starting menstruation (periods) in girls, and earlier menopause; and
- lower birth weight in babies.⁷

4.10 The Panel had concluded however, that there were 'many issues and limitations' in this evidence base – such as the risk of bias, the diversity of PFAS chemicals and their possible interactions with other chemicals. It therefore recommended that:

Decisions and advice by public health officials about regulating or avoiding specific PFAS chemicals should be mainly based on scientific evidence about the persistence and build-up of these chemicals.⁸

4.11 The Government's response referred to this history noting that enHealth's⁹ updated statement (issued July 2019) in effect reflected the Expert Panel's original findings on the potential health impacts of PFAS in

⁶ JSCFADT, *Inquiry into management of PFAS contamination in and around Defence bases*, December 2018, pp. 63–66.

⁷ *Expert Health Panel for PFAS: Summary*, April 2018, p. [1].

⁸ *Expert Health Panel for PFAS: Summary*, April 2018, p. [2].

⁹ The Environmental Health Standing Committee of the Australian Health Protection Principal Committee is referred to by the short title 'enHealth'.

2018.¹⁰ At hearings in February the Health Department's Principal Medical Officer Dr Gary Lum explained the intent of the updated advice:

What we've tried to do is explain, through the Environmental Health Standing Committee of AHPPC's [enHealth], revised statement, that we do acknowledge that there are studies and there are reports that suggest that there are observations of biological effects in humans associated with exposure to high levels of PFAS chemicals. We still maintain though that, when it comes to exposure to PFAS chemicals, there's yet to be any conclusive proof that exposure to PFAS chemicals causes a discrete or distinct human disease as such.¹¹

4.12 The Government response indicated that the Department of Health does however reflect new information in its advice and will 'continue to review scientific evidence both nationally and internationally in relation to the human health effects of PFAS through its established monitoring'.¹²

Review of the Health Based Guidance Values (HBGVs)

4.13 The Health Based Guidance Values (HBGVs) are developed by Food Standards Australia New Zealand. FSANZ advises the Department of Health and PFAS taskforce about food safety, which includes tolerable daily intake (TDI) advice on contaminated foods such as PFAS affected produce.¹³

4.14 The HBGVs are based on FSANZ recommendations in its 2017 report *Perfluorinated Chemicals in Food* which recommended TDIs of 20 ng/kg bw/day for PFOS and 160 ng/kg bw/day for PFOA.¹⁴

¹⁰ Government response, *Recommendation 3*, p. 11.

¹¹ Dr Gary Lum, Principal Medical Officer, Department of Health, *Committee Hansard*, Canberra, 24 February 2020, p. 2.

¹² Government response, *Recommendation 3*, p. 11.

¹³ See Department of Health, Food Standards Australia New Zealand (FSANZ) Health Based Guidance Values for Per- and Poly-Fluoroalkyl Substances (PFAS) www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-pfas-hbgv.htm viewed 19 February 2020.

¹⁴ Department of Health, FSANZ report on *Perfluorinated Chemicals in Food* www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-pfas-hbgv.htm#final viewed 20 July 2020.

4.15 The Sub-committee investigated the differences between standards being proposed by the European Food Safety Authority (EFSA) in its current review¹⁵ and the less stringent safety levels set by FSANZ. Dr Lum explained:

... we understand from our colleagues in FSANZ that one of the [EFSA] recommendations is to look at grouping some of the PFAS chemicals into a proposed tolerable weekly intake. FSANZ does make it clear, though, in terms of comparisons between what FSANZ did and what the Europeans did, that the FSANZ approach was to examine all of the available evidence. It felt that, based on the quality of the evidence, the human epidemiological information was not of a sufficient quality, so it based its work on animal experiments, factoring in various conversion factors to equate to the human side of things. It also looked at specific pharmacokinetic modelling, whereas what the Europeans did was spent a lot of their effort on human epidemiological factors, and it used an end point of the serum cholesterol. So that would go to explaining why there are some differences in the levels, and it is a little bit confusing when one group goes from a tolerable weekly intake to a tolerable daily intake and you've got to look at it over the lifetime exposure.¹⁶

4.16 FSANZ has advised that it is currently undertaking monitoring of PFAS in the general food supply as part of the 27th Australian Total Diet Study. With food sampling completed in April 2020, the report is expected for publication in mid-2021.¹⁷ This may have implications for review of the HBGVs which, in turn, underpin safety guidance for exposure to PFAS in the environment.¹⁸

¹⁵ In early February 2020, EFSA opened public consultation on draft opinion which proposed a single group TWI of 8 ng/kg body weight per week for PFOA, PFNA, PFHxS and PFOS, based on effects observed in humans. The consultation closed April 2020. See EFSA, PFAS public consultation: draft opinion explained www.efsa.europa.eu/en/news/pfas-public-consultation-draft-opinion-explained viewed 10 June 2020.

¹⁶ Dr Gary Lum, Principal Medical Officer, Department of Health, *Committee Hansard*, Canberra, 24 February 2020, p. 8.

¹⁷ Department of Health, FSANZ work on perfluorinated compounds, December 2018, viewed 20 July 2020.

¹⁸ National Health and Medical Research Council (NHMRC), *Submission 6*, p. [1].

- 4.17 Asked about the potential to review the HBGVs for PFAS in the light of the EFSA opinions Dr Scott Crerar, General Manager, Science and Risk Assessment, advised that FSANZ would continue to review the science and monitor EFSA's opinions, however: 'It's not really our decision. It would be a health/environmental health decision'.¹⁹

Recommendations for human health research

- 4.18 As discussed in this report, the JSCFADT had called for ongoing investment in research to improve PFAS remediation technologies 'based on the extent of contamination and risk to human and environmental health in each area' (*Recommendation 1*, point 3). This focus intersects with the need for ongoing research to better understand the health impacts of PFAS substances, which is supported by Government.
- 4.19 In its first report, the Sub-committee reviewed evidence on the PFAS Health Study, which is being conducted at the Australian National University's National Centre for Epidemiology and Population Health.²⁰
- 4.20 The Government response advises that this epidemiological study was commissioned by the Department of Health to provide data for a longitudinal assessment of the localised impact of PFAS exposure on people who have lived and worked at or near in or near Williamstown, Oakey and RAAF Tindal near Katherine. The analysis was to be based on blood samples gathered under the free Government funded Voluntary Blood testing program (VBTP).
- 4.21 Initially offered to residents within the three investigation areas from November 2016, the program was later extended to Australian Defence Force members from December 2016. Access to the program was closed in April 2019,²¹ but extended by two months to June 2019, to allow the PFAS Health Study to progress to its next phase of assessment.²²

¹⁹ Dr Scott Crerar, General Manager, Science and Risk Assessment, FSANZ, *Proof Committee Hansard*, Canberra, 15 June 2020, p. 4.

²⁰ JSCFADT, Chapter 2, *Inquiry into PFAS remediation in and around defence bases – First report* December 2020 (hereafter *First report*, December 2019).

²¹ Australian Government, *Submission 64*, p. 16, see JSCFADT, *Inquiry into management of PFAS contamination in and around Defence bases*, December 2018, p. 68.

²² Government response, *Recommendation 4*, p. 13.

Extensions to blood testing

- 4.22 The JSCFADT report had discussed the poor uptake of the VBTP service, despite its delivery to affected communities free of cost. *Recommendation 4* called for the program to be extended in scope and availability to provide more data for a longitudinal assessment. Accordingly, it also proposed to improve community awareness of the program, simplify the testing process, extend the program to additional areas and to ensure comparability with international approaches.²³
- 4.23 In its first report, Sub-committee recognised that extended blood testing could also provide a measure of security for people in PFAS affected communities anxious to see evidence of progress in remediation efforts.²⁴
- 4.24 In discussion with Professor Martyn Kirk, Principal Investigator of the PFAS Health Study, the Sub-committee asked about the value of extending the blood testing program to support longitudinal assessment.²⁵
- 4.25 Professor Kirk advised that the VBTP had been expensive, up to \$500 a test. Dr Miranda Harris, Public Health Registrar with the study, advised that to date there were around two and a half thousand samples being assessed, the anticipated amount for the PFAS Health Study's evaluation. Given cost, the specificity of the chemicals and their extended half-life (from two to nine years depending on the chemical) they considered that, while there were some good overseas precedents, an extension of the program on research value would be a decision for government.²⁶
- 4.26 In its response to *Recommendation 4*, the Government reported on the cost of the program. It advised of commitments of \$55 million in the VBTP in 2016, of which \$14 million went to the Department of Health to provide community support packages to PFAS affected communities in Williamtown and Oakey. In December 2017, a further \$5.7 million was

²³ *Recommendation 4, JSCFADT, Inquiry into management of PFAS contamination in and around Defence bases*, December 2018, p. 74

²⁴ *First report*, December 2019, pp. 20–21.

²⁵ Professor Martyn Kirk, Principal investigator, PFAS Health Study, Australian National University (ANU) and Dr Miranda Harris, Public Health Medicine Registrar, ANU, *Committee Hansard*, Canberra, 25 November 2019, p. 8, and see *First report*, December 2019, Chapter 3, pp. 16–17.

²⁶ Professor Kirk, ANU PFAS Health Study, and Dr Miranda Harris, ANU, *Committee Hansard*, Canberra, p. 8, and see *First report*, December 2019, Chapter 3, pp. 16–17.

allocated for a community support package to those impacted by PFAS emanating from RAAF Tindall near Katherine.²⁷ These packages comprise:

- an Epidemiological Study to help us better understand the human health implications of exposure to PFAS
- a Voluntary Blood Testing Program for residents living in the investigation areas around the Williamtown, Oakey and Katherine bases
- a communications strategy focusing on the human health related aspects of PFAS, and
- dedicated mental health and counselling services to assist communities affected by PFAS contamination, including face to face, online and telephone counselling services.²⁸

4.27 In addition, the response emphasised that the support packages were offered on the basis of confirmed evidence of significant contamination:

Community Support Packages were offered to these communities because the extent of contamination and significant exposure pathways, such as contaminated drinking water, to a large proportion of the population were established and well understood.²⁹

4.28 As discussed in Chapter 3, submissions have highlighted the situation of residents living on properties contiguous to, but excluded from, formal support programs available to those on PFAS managed sites. This includes access to free blood testing which may also validate their claims for these supports.³⁰

4.29 The submission from the Hawkesbury Environment Network (HEN) refers to research indicating high levels of contamination in the Lowlands area near RAAF Richmond, which is prone to flooding. HEN reports that Defence has rejected requests to re-test soil and water after a recent flood and refused requests for community blood testing despite evidence of very high PFAS readings being found in local residents' blood.³¹ It maintains:

²⁷ Government response, *Recommendation 4*, p. 12

²⁸ Government response, *Recommendation 4*, p. 12

²⁹ Government response, *Recommendation 4*, p. 12.

³⁰ Hawkesbury Environment Network (HEN), *Submission 3*.

³¹ HEN, *Submission 3*, pp. [2, 3].

We believe free blood testing should be made available to our local residents who wish to have their blood tested. We need to document where we are at now and then have access to ongoing testing. As the Health industry discovers more and more about the effects of PFAS on the human body we do not want our local area to be ignored. The cost of undertaking the blood testing ourselves is cost prohibitive and having spoken to a phlebotomist in the area the cost should not be as high as it is based on the simplicity of the test compared to other blood tests. We believe we should be able to access the tests on Medicare in the same way as testing for lead in the blood can be undertaken through Medicare.³²

Targeted research grants

- 4.30 As discussed in Chapter 3, the Government has dedicated funds to support research into remediation technologies and over \$12.5 million in research to better understand the health impacts of PFAS exposure.³³
- 4.31 In response to *Recommendation 4* the Government advised that it had allocated \$11.7 million to fund a Targeted Call for Research on PFAS Substances which was being administered by the National Health and Medical Research Council (NHMRC).³⁴
- 4.32 In its submission, the NHMRC reported that it had formed a reference group of scientific experts and community members to set research objectives and provide local context for the research call which opened in late December 2019 and closed on May 2019. Applications were peer reviewed by an expert panel, with different membership from the Reference Group and with input from community representatives.³⁵
- 4.33 On December 2019, nine successful research proposals were announced. The NHMRC advised of the broad topics under investigation:
- Biological effects of PFAS exposure, molecular mechanisms, and biotransformation
 - Health outcomes of firefighters and the effect of PFAS on other health conditions

³² HEN, *Submission 3*, p. [3].

³³ Government response, *Recommendation 2*, p. 9.

³⁴ Government response, *Recommendation 4*, p. 13.

³⁵ National Health and Medical Research Council (NHMRC) *Submission 6*, p. [2].

- Exposure pathways, monitoring of exposure (including the use of biomarkers) and assessment of exposure controls.³⁶
- 4.34 Projects were awarded approximately \$11 million in total over five years.³⁷ The details of the recipients were posted on the NHMRC website.³⁸
- 4.35 At hearings Health's Dr Lum provided an overview of the selected projects, as follows:
- University of Sydney: systematic multidisciplinary approach to define the impacts, molecular mechanisms and ways to treat PFAS exposure.
 - Monash University: per- and poly-fluoroalkyl substance exposure and health outcomes in firefighters.
 - The University of Queensland: assessing effectiveness of PFAS exposure control in individuals from exposed communities and occupationally exposed cohorts such as firefighters.
 - University of Queensland project: comprehensive characterisation of the PFAS exposome.
 - University of Newcastle: utilising male fertility as a biomarker of health to understand the biological effects of PFAS.
 - University of South Australia: impact of exposure pathway and source on PFAS absorption and bioavailability.
 - University of Queensland: human exposure to PFAS and their precursors in the environment and their biotransformation processes.
 - Queensland University of Technology: human bio-monitoring of PFAS: assessing reliability and validity.
 - University of Newcastle: using advanced technologies to investigate the impact of PFAS exposure on the human mucosal barrier and interactions with pre-existing medical conditions.³⁹
- 4.36 The Sub-committee invited submissions on these and a number of other research projects. A focus in submissions received to date has been on the health impacts of high PFAS exposure on fire fighters.
- 4.37 Associate Professor Deborah Glass at Monash University advised of her team's NHMRC funded project to identify among firefighters whether:

³⁶ NHMRC, *Submission 6*, p. [2].

³⁷ NHMRC, *Submission 6*, p. [2].

³⁸ NHMRC, Outcomes of funding rounds www.nhmrc.gov.au/funding/data-research/outcomes-funding-rounds viewed 22 July 2020.

³⁹ As listed in evidence from Dr Lum, Department of Health, *Committee Hansard*, Canberra, 24 February 2020, p. 2.

- the risk of developing cancers, in particular bladder, renal and testicular cancer is associated with PFAS exposure from firefighter foams;
- the risk of death from major disease subgroups, such as liver, kidney and cardiovascular conditions is associated with PFAS exposure from firefighter foams; and
- whether there are exposure-response relationships for any identified increased risks.⁴⁰

4.38 The Sub-committee invited information on the Metropolitan Fire Brigade (MFB) and Macquarie University's PFAS Blood Trial. In its submission the Macquarie University advised:

This is a randomised, controlled trial of current and former Australian Firefighters in the Metropolitan Fire Brigade (MFB) and contractors, with previous occupational exposure to PFAS and elevated PFOS levels. The study investigates whether a simple intervention over 12 months (whole blood donation every 12 weeks or plasma donation every 6 weeks) might alter levels of PFAS in MFB staff's blood. The trial also includes an observation group.⁴¹

4.39 The United Firefighters Union of Australia (UFUA) provided background to this project in a detailed submission on the impacts of firefighting foams and other contaminants on firefighters. It notes that the MFB's PFAS Blood Study was a world first. The study assesses results on 275 MFB professional firefighters with 10 or more years' exposure to PFAS.⁴²

4.40 Further consideration will be given to submissions on research projects as part of the Committee's ongoing review of the effectiveness of remediation processes and on PFAS-related human and environmental health impacts. Other submissions discussing the need for mental health support and consideration of communication risk strategies to reduce community stresses are discussed below.

⁴⁰ Dr Lum, Department of Health, *Committee Hansard*, Canberra, 24 February 2020, p. 2.

⁴¹ Metropolitan Fire Brigade (MFB) and Macquarie University, PFAS clinical trial, *Submission 11*, p. 2.

⁴² United Firefighters Union of Australia (UFUA), *Submission 17*, p. 19.

Supports to PFAS affected communities

- 4.41 As previously noted, the Government in its response to *Recommendation 4*, for an extended blood testing program, advised that its VBTP packages not only involved commitments to support the epidemiological study and provide free blood testing in targeted communities, but also:
- a communications strategy focusing on the human health related aspects of PFAS, and
 - dedicated mental health and counselling services to assist communities affected by PFAS contamination, including face to face, online and telephone counselling services.⁴³
- 4.42 In response to JSCFADT's *Recommendation 6*, for free individual case and financial counselling for all those affected by PFAS contamination, the Government indicated that specialised services are not now offered, but may be accessed as part of supports provided to the Australian community generally. This includes mental health and financial counselling support services provided by Australian agencies and state and territories services.
- 4.43 The response also indicated that specific supports in two communities, Williamstown and Oakey, are being provided by Community Liaison Officers from the Department of Human Services. These officers support community engagement, link residents to services and facilitate coordination of government activities.⁴⁴

Communication management

- 4.44 In its first report, the Sub-committee recorded ANU PFAS Health Study findings that people in PFAS affected communities wanted certainty, in uncertain circumstances, which the Study found requires 'greater transparency and consistency in the information they received', and a focus on solutions and pathways forward.⁴⁵

⁴³ Government response, *Recommendation 4*, p. 12.

⁴⁴ Government response, *Recommendation 6*, p. 17.

⁴⁵ *First report*, December 2020, p. 42, ref: C Banwell, T Housen, K Smurthwaite, S Trevenar, L Walker, K Todd, M Rosas [Ngaigu-Mulu, Aboriginal Corporation, Katherine, NT, Australia], M Kirk, *The PFAS Health Study, Component One: Oakey, Williamstown and Katherine Focus Groups Study*, ANU, Report prepared for the Department of Health, February 2019, p. 6.

4.45 The Sub-committee noted in that review problems with communication over ostensibly practical matters, such as the official clearance status of investigated land. Also problematic to communities was the volume and complexity of much of the key guidance material on progress under PMAPs, and on health and food safety – things that affect people daily in their lives.⁴⁶

Communicating about health risks

4.46 As noted above, the Government has referred to its revised enHealth statement to indicate that it has met the requirements of *Recommendation 3*. Dr Lum acknowledged at hearings that the first statement had generated distress and confusion in PFAS affected communities:

We acknowledged, in listening to the community reference group, the concerns that they had, that, on the one hand, we had as an opening statement on much of our documentation that there was no evidence of any health effects, yet, on the other hand, further into some of our documentation we would describe some of the reported research and the potential for biological effects that might occur as a result of exposure to PFAS and associations rather than causations. That seemed to be a bit of a mismatch.⁴⁷

4.47 The Sub-committee received a submission focussing on the specific challenges and risks of communication about PFAS issues to the general public from Dr K Morphett, Associate Professors K Fielding, University of Queensland and A Roiko, Griffith University. Their submission reported findings of their multidisciplinary research project which evaluated the public's risk perceptions about PFAS.⁴⁸

4.48 The project, which was funded by the Queensland Alliance of Environmental Health Sciences (QAEHS) at the University of Queensland in 2017, had three objectives, to:

- examine the ways that health risks associated with PFAS exposure have been communicated to the public in Australia,

⁴⁶ *First report*, December 2020, p. 42.

⁴⁷ Dr Lum, Department of Health, *Committee Hansard*, Canberra, 24 February 2020, pp. 1–2.

⁴⁸ Dr Kylie Morphett, School of Public Health, Faculty of Medicine and Associate Professor Kelly Fielding, School of Communications and Arts, University of Queensland (UQ), with Associate Professor Anne Roiko, School of Medicine–Environmental Health, Griffith University. See Dr K Morphett, Assoc Profs K Fielding and A Roiko, *Submission 18*, p. 1.

- determine public awareness and knowledge about PFAS, and
- identify factors that may influence concerns about PFAS in the general public.⁴⁹

4.49 By way of context the submission observed that:

One of the key difficulties in communicating with the public and affected stakeholders about PFAS is scientific uncertainty about the health effects of exposure. Research on other controversial scientific topics has shown the public want to be informed about scientific uncertainty and that acknowledging uncertainty can increase the credibility of experts. In Australia, state and commonwealth government communication materials aimed at the public and affected communities have emphasised scientific uncertainty about the health effects of PFAS, but it is unknown how these communications might affect public concerns.⁵⁰

4.50 Their research yielded the following conclusions and recommendations, in summary:

- There has been substantial coverage of PFAS in the traditional news media which is where participants find information about the issue. It is important to continue to monitor the media in this area in order to understand how government health advice is being translated by the media, and what messages the public is receiving about PFAS.
- The media is an important way for members of affected communities to have their voice heard. With a reduction in the number of regional news sources in Australia... It is important that communities that have higher levels of exposure than the general population have avenues for communicating their concerns and wishes.
- Queenslanders indicated that the most trusted sources of information about PFAS were the Australian Medical Association, the Queensland and Commonwealth Departments of Health, and the Queensland Department of Environment and Heritage. Including the most trusted organisations and communicators in communications strategies is recommended.
- Scientists working in the area of PFAS were the least likely sources to be quoted in the media. It is unknown if...they are not being approached by journalists, or...decide not to contribute. The development of closer relationships between

⁴⁹ Dr K Morphett, Assoc. Profs K Fielding and A Roiko, *Submission 18*, p. 1.

⁵⁰ Dr K Morphett, Assoc. Profs K Fielding and A Roiko, *Submission 18*, p. 1.

government officials, journalists and scientists that work in this area would be worthwhile.

- More research on how best to communicate about the risks of PFAS to those most at risk of exposure would be beneficial... It is important that once these findings about PFAS and health become more conclusive, they can be communicated in ways that are acceptable and understandable. Pilot testing is a key step in the development of effective health communications, and should be conducted where possible, prior to releasing messages about PFAS and health.
- It is important to monitor what health officials in other countries are telling their populations. The media often report on conflicting health advice between countries... It is important that Australian health advice acknowledges and explains any differences in health advice or actions, as conflicting health advice can lead to the development of distrust and anxiety.⁵¹

Community information and awareness

- 4.51 The Department of Defence has emphasised its commitment to keeping affected communities informed about the progress of remediation work under PMAPs and related issues. At hearings in December 2019, representatives advised of 137 separate community engagements held, 'with more to come'.⁵²
- 4.52 At hearings at that time, the Committee had also investigated with Defence concerns about the quality and nature of these community consultations at RAAF Richmond. Defence referred to its presentation on the final investigation and PMAP for the site to the community and its commitment to ongoing monitoring, which involved a high level responsiveness and accountability to community concerns.⁵³
- 4.53 In its submission the HEN, which also represents the Hawkesbury PFAS Community Network for Richmond RAAF, referred to information sessions held in October and August 2019. HEN reported on the volume of information provided by Defence, indicating that the observations made on this in the Sub-committee's first report are still relevant. HEN stated:

⁵¹ Dr K Morphet, Assoc. Profs K Fielding and A Roiko, *Submission 18*, pp. 7–8.

⁵² Mr Steven Grzeskowiak, Deputy Secretary, Estate and Infrastructure, Department of Defence, *Committee Hansard*, 2 December 2020, p. 2.

⁵³ Mr Christopher Birrer, First Assistant Secretary, Department of Defence, *Committee Hansard*, Canberra, 2 December 2019, p. 9.

'we believe better (not more) information is needed. Defence have inundated us with information to the point that there is no clear advice'.⁵⁴

- 4.54 The communication style in PFAS information sessions was also a problem with no real consultation on the plan's management:

There was no community consultation prior to the plan being released. Defence held an 'Information session' for the community. It was not well advertised and the way we were expected to get information on the management plan was through a continual automated power point display. People could not ask questions on the management plan with no ability to read it at the session. Since the session we have ploughed our way through the plan and two stark points were the result. Defence only plans to remediate the Base property. And individual landowners are expected to approach defence to have their land remediated. There is no information how to do this and no one is paying costs except landowners themselves.⁵⁵

- 4.55 HEN advised that the lack of support extends to provision of adequate signage and local advice to affected residents, including many residents of non-English speaking backgrounds, about the risks of high level exposure in land near the Defence base. HEN states:

If it were not for our local community group forming to inform the community, many more people would be unaware of PFAS being a serious issue in this area. It has been left to our community volunteers to undertake informing the community without any budget.⁵⁶

Mental health supports

- 4.56 As noted above, residents in Williamstown, Oakey and Katherine had access to special mental health counselling and telephone support services under the Government's Voluntary Blood Testing Program packages. The Committee was told these services ended in June 2019 (with the VBTP).
- 4.57 The Government's response states that Community Liaison Officers from the Department of Human Services now link community members to

⁵⁴ HEN, *Submission 3*, pp. [3-4].

⁵⁵ HEN, *Submission 3*, p. [3].

⁵⁶ HEN, *Submission 3*, p. [2].

available supports. The response also notes that information about the support services offered will also be delivered by relevant agencies – Department of Defence, the Department of Infrastructure, Transport, Cities and Regional Development, and the PFAS Taskforce, which will ‘use established communication channels and consider any additional opportunities to provide advice on these matters’.⁵⁷

- 4.58 At hearings in February 2020, the Sub-committee had asked the Department of Health about access and ongoing availability of dedicated mental health support services.⁵⁸ The Department subsequently confirmed (in April 2020) that Williamstown, Oakey and Katherine continue to have access to ‘funded dedicated mental health and counselling services’. These support services can be accessed by contacting the local Primary Health Networks (PHNs), or visiting a General Practitioner (GP) for a referral to a mental health support service.⁵⁹
- 4.59 The Department further advised that, under current funding agreements, the three relevant PHNs are funded to provide mental health and counselling services for Williamstown, Oakey and Katherine until 30 June 2021. As shown on the table opposite, data provided on the take up of services through the PHNs (at 31 December 2019) indicates that there is a need for these supports.⁶⁰
- 4.60 In the table, the very low comparative take up at Katherine, in both clients and services offered, is explained in the submission by services there starting one year later than the other communities (under the VBTP support package).⁶¹

⁵⁷ Government response, *Recommendation 6*, p. 17.

⁵⁸ Dr Gary Lum, Principal Medical Officer, Department of Health, *Committee Hansard*, Canberra, 24 February 2020, p. 2.

⁵⁹ Department of Health, *Submission 5 – Answers to Questions on Notice (AQoN) Question 1 (a)*, p. 1.

⁶⁰ Department of Health, *Submission 5 – AQoN, Question 1 (a), Table*, p. 1.

⁶¹ Department of Health, *Submission 5 – AQoN, Question 1 (a)*, p. 1.

Table 2 Mental health services take up—December 2019

	Williamstown	Oakey	Katherine	Total
<i>Number of Clients</i>	387	127	3	517
<i>Number of Sessions *</i>	1554	377	4	1935

*Sessions charged to PHN

- 4.61 In its first report the Sub-committee cited information provided by the ANU's PFAS Health Study on the results of its Community focus group surveys. These, members were advised, provided a mental health 'snapshot' of different communities at a point in time and how their feelings and experiences changed over time. Longitudinal assessment of these changes was not however planned in the study.⁶²
- 4.62 The Sub-committee received a submission from a multi-institutional team of experts in population, physical and mental health.⁶³ In the submission, the project team highlights the need for a holistic remediation response to the impacts of PFAS on the mental and physical health of affected communities, which can be cumulative over time.⁶⁴ These include anxiety, uncertainty and a feeling of being 'stuck' in an unresolvable and [literally] toxic situation.⁶⁵ Residents can be further destabilised by feelings of powerlessness in their engagement with government agencies involved in remediation work, and the impacts of information programs that are not strategically targeted to meet the particular needs of individual communities.⁶⁶ In addition there is a breakdown of community cohesion,

⁶² Professor Kirk, PFAS Health Study, ANU, *Committee Hansard*, Canberra, p. 8.

⁶³ ANU: Professor Cathy Banwell, Research School of Population Health, College of Health and Medicine and Prof. Philip Batterham, Centre for Mental Health Research; University of Newcastle: Dr Kathryn Taylor MD, Associate Prof. Craig Dalton MD, Prof. Will Rifkin, Hunter Research Foundation Centre, with associates in UQ and the University of Griffith. See PFAS communities, risk communication and mental health—ANU and University of Newcastle, *Submission 12*, p. 1.

⁶⁴ PFAS communities, risk communication and mental health—ANU and University of Newcastle (UoN)*Submission 12*, p. 4.

⁶⁵ PFAS communities, risk communication and mental health—ANU and UoN, *Submission 12*, p. 2.

⁶⁶ PFAS communities, risk communication and mental health—ANU and UoN, *Submission 12*, p. 4.

due to the different interests of local industries and social groups in response to the contamination.⁶⁷

- 4.63 Despite this, and in contrast to ANU's finding on the volume of work on physical health and PFAS, the Project team's literature review revealed nothing on the mental health impacts of PFAS contamination. The submission further notes that none of the nine NHMRC PFAS research grants went to mental health research projects.⁶⁸
- 4.64 The Project team agrees for adoption of a longer term focus on community level impacts of PFAS and use of participatory approaches to better 'inform, consult, involve, collaborate, and empower' family and community resilience. To support this the submission recommends for:
- Long-term studies of mental health impacts of PFAS contamination in high profile communities, such as Oakey, Katherine and Williamtown;
 - Employing partnerships of researchers, public health practitioners and community members to develop understanding of physical health risks and to enable the creation, piloting and implementation of tools to address socio-economic and mental health impacts;
 - Establishment of a program of research and application directed at the nexus of environmental health, community mental health and socio-economic wellbeing to address the legacies of PFAS contamination.⁶⁹

Compensation claims

- 4.65 *Recommendation 5* of the JFSCFADT report called on Government to assist property owners and businesses affected by PFAS by offering compensation 'for quantified financial losses' and prioritised this according to the impact from the loss: of intended land use; by investment in land affected by PFAS prior to public announcements; those in the most highly contaminated areas.⁷⁰

⁶⁷ PFAS communities, risk communication and mental health – ANU and UoN, *Submission 12*, pp. 2–3.

⁶⁸ PFAS communities, risk communication and mental health – ANU and UoN, *Submission 12*, p. 4.

⁶⁹ PFAS communities, risk communication and mental health – ANU and UoN *Submission 12*, p. 5.

⁷⁰ Government response, *Recommendation 5*, p. 15.

- 4.66 The recommendation also indicated that any successful property-based claim should not preclude future claims relating to human health impacts attributable to PFAS exposure as a result of research.⁷¹
- 4.67 The Government response 'noted' this recommendation in a reply which for the most part outlines the framework for management of PFAS site investigation and remediation work.⁷² This, with commitments to review health advice on the basis of expert advice and to monitor international developments, aims to confirm the probity of Defence's policy response and promote confidence in it.⁷³
- 4.68 The specific response to the recommendation for compensation advises:
- It is open to any individual or business who believe they have suffered loss or damage, as a consequence of Government activities, to submit a legal claim directly to the relevant agency or Department.
- The Government supports the just resolution of legal claims by agreement, not litigation, where appropriate. All legal claims are handled in accordance with the Attorney-General's Legal Services Directions 2017 (Cth).⁷⁴
- 4.69 When the JSCFADT reported in December 2018 class actions had been raised against Defence on behalf of affected businesses and individuals in the Oakey, Williamtown, and Katherine investigation areas. At September 2018 there were also 37 non-litigated claims lodged with Defence for compensation. Of these 19 related to Williamtown. Only two and two partial claims had been assessed at that time.⁷⁵

⁷¹ This includes an overview of the its PFAS investigation and management process, and the health advice that PFAS affected communities should minimise exposure to contaminants while health impacts are verified, and a commitment to national and international cooperation on PFAS related matters and to ensure PFAS-related actions are international best practice. See Government response, *Recommendation 5*, pp. 15–16.

⁷² Government response, *Recommendation 5*, p. 15.

⁷³ Government response, *Recommendation 5*, p. 16.

⁷⁴ Government response, *Recommendation 5*, p. 16.

⁷⁵ Department of Defence, *Submission 64.1*, p. 1, Inquiry in Management of PFAS Contamination in and around Defence Bases, and see JSCFADT PFAS contamination inquiry report, December 2018 p. 92.

- 4.70 A landowner in Oakey was the first to reach a compensation agreement with Defence over PFAS contamination of groundwater on his property which adjoins the Army Aviation Centre Oakey. At that time, in March 2019, there were 45 claims for compensation lodged with Defence.⁷⁶
- 4.71 In March 2020, documents released by the Federal Court indicated that that \$92.5 million would be paid under successful class actions litigated by Shine Lawyers to residents of Katherine in the Northern Territory. A further \$86 million would be awarded to residents in Williamstown in NSW and \$34 million to residents of Oakey, Queensland.⁷⁷
- 4.72 In April 2020 Shine Lawyers announced it had launched another class action for 40 000 in residents in Wodonga, Darwin, Townsville, Wagga Wagga, Edinburgh and Bullsbrook, the largest claim in Australian history.⁷⁸
- 4.73 As discussed above, one consequence of this has been that PFAS has become a known chemical which much of the community understands to be harmful. The UFUA referred to increasing media coverage in the print media in recent months which indicates that the presence and profile of PFAS is better understood by the general public, including in relation to:
- Successful PFAS class action settlement for Williamstown residents;
 - Successful PFAS class action settlement for Katherine residents;
 - PFAS-contaminated soil in the West Gate Tunnel project;
 - PFAS contamination in Dubbo water;
 - Emerging PFAS research abroad;
 - PFAS testing at Launceston Airport;
 - Potential class actions arising from PFAS contamination at other defence sites (HMAS Albatross and Jervis Bay Range).⁷⁹

⁷⁶ ABC News, 'PFAS compensation settled for Oakey landowner in Australian first', 27 March 2019 www.abc.net.au/news/2019-03-27/australias-first-pfas-compensation-settled/10944048 viewed 17 July 2020.

⁷⁷ C Fellner, Herald Investigation: 'Millions to flow in toxic foam win', *Sydney Morning Herald* (SMH) 12 March 2020, viewed 17 July 2020.

⁷⁸ C Knaus, New class action launched over toxic firefighting chemicals used by Defence, *The Guardian*, 16 April 2020 theguardian.com/australia-news/2020/apr/16/new-class-action-launched-over-toxic-firefighting-chemicals-used-by-defence viewed 17 July 2020.

⁷⁹ Citing, for example, articles published in the print media over the month of May 2020, see United Fighter Fighters Union of Australia (UFUA), *Submission 17*, p. 24.

- 4.74 Some community organisations writing to the Sub-committee have expressed concerns that despite the Commonwealth's responsibility as 'polluter' on Defence sites, the magnitude of issues arising outside these parameters is supporting a 'hands off' approach by governments at all levels.⁸⁰
- 4.75 In review of the Government's response, the Coalition against PFAS (CAP) remained concerned that 'State and Federal Government have no coherent policy to the management of PFAS contamination'. CAP concluded: 'The current approach to PFAS management nationally is being played out in our courts, not being driven by our Parliament.'⁸¹
- 4.76 HEN's submission highlighted the tensions between state and territory obligations and those of the Commonwealth:

The EPA has a policy that the 'Polluter pays'. The EPA NSW has clearly stated that Defence is the Polluter of the Hawkesbury and that Defence is responsible, but our community has not experienced this policy in action...No claim has been dealt with in fact the claims once submitted seem to sit in a 'too hard' box and residents hear nothing more about their claims after initially being informed that the claim has been received.

At no time have we, as stakeholders in this matter, been included in a discussion for a viable solution and remediation compensation. We have not been told about how Defence will monitor the contamination in this area.⁸²

Committee comment

- 4.77 The Committee notes that communities in PFAS-affected areas remain concerned about the Government's management of health and environmental issues, and the delayed implementation of the JSCFADT's nine report recommendations.
- 4.78 In its response to the JSCFADT's *Recommendation 3* the Government endorsed the need for review of the health opinion. The Sub-committee in this chapter has noted the significant investment in research that has been

⁸⁰ Committee terminology, see Coalition against PFAS (CAP) *Submission 8* and HEN *Submission 3*.

⁸¹ CAP, *Submission 8*, pp. [2, 4].

⁸² HEN, *Submission 3*, p. [3].

made to date to clarify and address the potential health impacts of PFAS. This includes work being done under the ANU's PFAS epidemiological study, which was reviewed in the Sub-committee's first report, and the funds provided to the National Medical Health Research Council for its PFAS special grant scheme.

- 4.79 The ANU PFAS Health Study results are now delayed until mid-2021 due to the COVID-19 response;⁸³ the NMHRC research work will be ongoing for five years. During this time Food Standards Australia New Zealand (FSANZ) will be monitoring and reviewing the food safety standards which underpin PFAS regulatory frameworks. As the PFAS Health Study's Professor Kirk advised, there is an enormous volume of research work being done on the possible health impacts of PFAS internationally.⁸⁴ This includes the ongoing review of tolerable daily intake levels (TDIs) for PFAS by the EFSA and other international bodies.
- 4.80 The Committee has concerns about the disparity between the PFAS TDIs under consideration by EFSA and those less stringent standards set by FSANZ for our region. The Committee will keep a watching brief on domestic and international developments in this area during its progress review.
- 4.81 With this work in train, the Committee considers that the Government's review of enHealth guidance highlighted in the response to *Recommendation 3* is counterproductively modest. As suggested by experts cited in this chapter, lack of clear and accurate health advice hinders understanding of the nature and risks of PFAS and its remediation, and may also incite confusion and stress in the broader community.
- 4.82 The Government's response to *Recommendation 4*, for extended blood monitoring, explains the purpose and context of the testing: to provide samples for research on exposure levels and associated impacts, and to inform the wider national response. The ANU PFAS Health Study also indicated that extended blood testing was not scientifically beneficial, unless long term, carefully designed and backed by Government. Some VBTP community support programs however are ongoing for residents at Williamtown, Oakey and Katherine who may access a dedicated mental health program through a GP or public health network until mid-2021.

83 Due to the COVID-19 response, see PFAS Health Study at rsph.anu.edu.au/research/projects/pfas-health-study viewed 6 August 2020.

⁸⁴ *First report*, December 2019, p. 9.

- 4.83 As discussed in this review, the response to *Recommendation 6*, for counselling and supports, seems inadequate given the level of need on the ground. As shown by research, people in PFAS affected communities experience the same psychosocial impacts as those affected by natural disasters such as bushfires – loss of home, income and community. Accurate information reduces confusion and supports community cohesiveness; access to appropriate mental health supports may reduce depression and the risk of suicide.

Recommendation 5

The Committee recommends that the Government review its local information and broader media strategy to ensure information on PFAS related matters is factual, cites trusted sources, and is well targeted to inform specific audiences about priority issues and concerns.

Recommendation 6

The Committee recommends that the Government adopt participatory approaches to improve collaboration and involvement with the community.

Recommendation 7

The Committee recommends that the Government should fund research to better understand the mental health impacts of living with PFAS contamination and related human made disasters to better inform Government services and supports.

Recommendation 8

The Committee recommends that the Government should provide all people affected by PFAS with mental health supports and counselling services, with a dedicated link and a phone contact on the PFAS website for accessing these services, and regular updates provided in affected communities about what services are available.

- 4.84 Finally, in its response to *Recommendation 5*, for compensation to affected communities, the Government indicates that it has met its responsibilities to people in PFAS affected communities by addressing the impacts of PFAS through remediation work. It notes in addition, that any compensation claims made will be dealt with individually by settlement.
- 4.85 The growing number and size of the class actions being launched may be considered to indicate that current remediation efforts are not adequate compensation to PFAS affected communities for the losses incurred.
- 4.86 Communities remain concerned about a lack of commitment from the Government to providing compensation for property owners for losses resulting from contamination.
- 4.87 Some submitters to this inquiry seem to feel they have fallen through the cracks in the system. One contributor is the disjuncture between federal and state/territory responsibilities which leads to the conclusion, as one submission put it, that government is relinquishing responsibility for some affected communities to the courts.
- 4.88 Given recent discussion in the media, based on the release of Federal Court advice, claimants are paying enormous amounts to fund the costs of class actions out of successful claims won from the Commonwealth. In the case of Williamstown,⁸⁵ these amounted to nearly half the total amount awarded. This seems a poor economy.
- 4.89 In the light of this, the Sub-committee is seeking more information from the Department of Defence about the current number of litigated and non-litigated cases received, their claim status, and the costs to the Commonwealth of their resolution to date. This may inform further scrutiny of this matter in future reviews.

⁸⁵ Federal Court of Australia, Notice As to Proposed Settlement of the Williamstown PFAS Contamination Class Action, NSD 1908 of 2016 Settlement Notice 1, see www.fedcourt.gov.au/law-and-practice/class-actions/class-actions/documents viewed 21 July 2020.

Recommendation 9

The Committee recommends that the Government prioritise assisting property owners and businesses in affected areas through compensation for financial losses associated with contamination emanating from Defence bases, including the possibility of buy-backs.