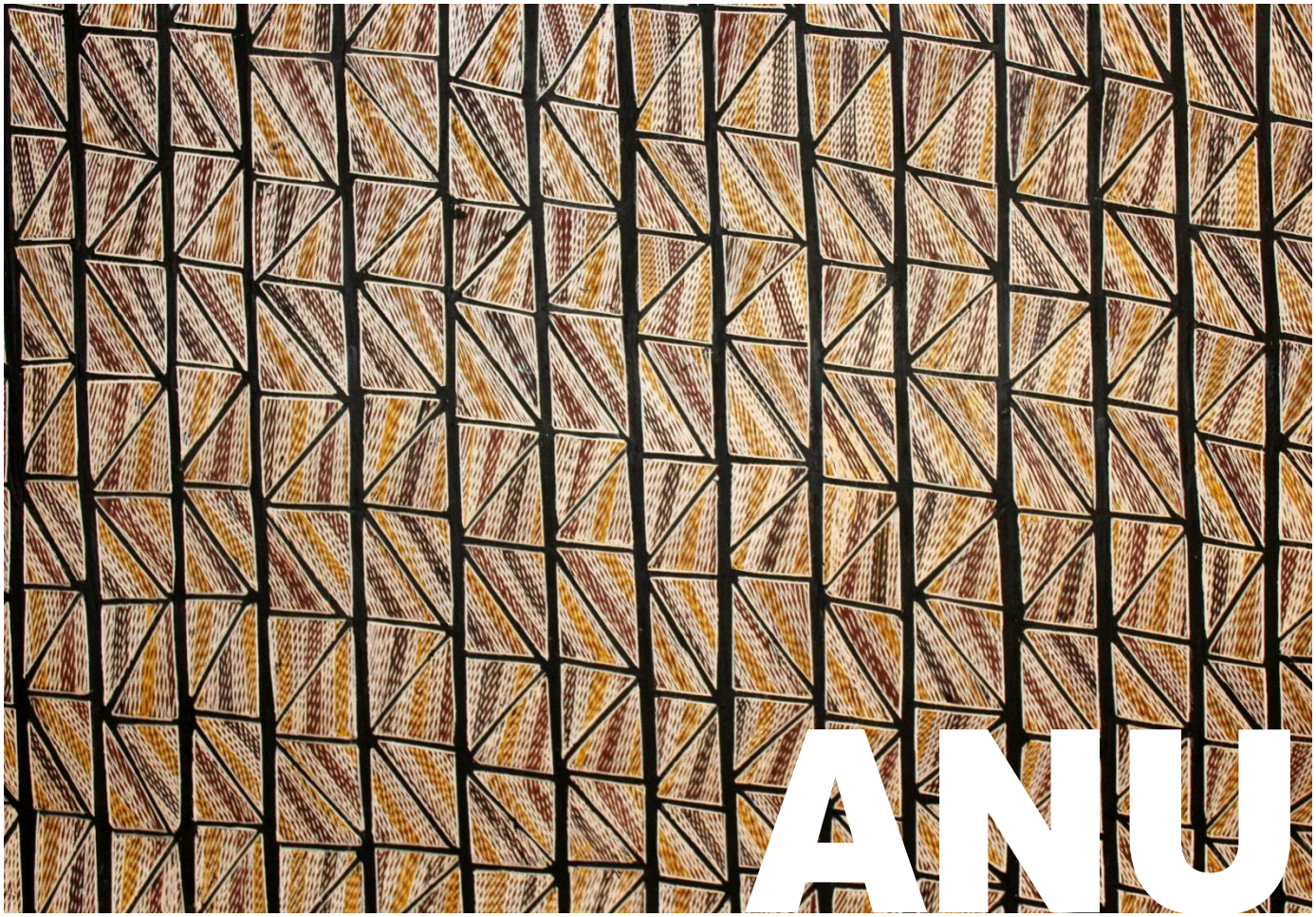
Australian National University



SUMMARY OF THE FINAL REPORT REVIEWING METHODS FOR ASSESSING PROGRESS TOWARDS CLOSING THE GAP

V. COOMS, F. MARKHAM, B. HARRAP, J.R. BRAY, W. SU, E. SHIOSAKI, Y. DINKU, D. HOWARD-WAGNER, N. BIDDLE, P. SOMBOONSIN AND M. YAP

Centre for Indigenous Policy Research, POLIS: The Centre for Social Policy Research

CIPR COMMISSIONED REPORT NO. 9/2024

Series note

The Centre for Indigenous Policy Research (CIPR) undertakes high-quality, independent research to further the social and economic development and empowerment of Indigenous people throughout Australia.

For more than 30 years, CIPR (formerly CAEPR) has aimed to combine academic and teaching excellence on Indigenous economic and social development and public policy with realism, objectivity and relevance.

CIPR maintains a substantial publications program, including Research Monographs, Discussion Papers, Working Papers and Topical Issues.

Commissioned Reports present the outcomes of research that has been commissioned by research partners from the government, community and not-for-profit sectors. Commissioned Reports are considered for publication on a case-by-case basis. Peer review arrangements vary between reports.

All CIPR publications are available in electronic format for free download from CIPR's website: https://caepr.cass.anu.edu.au

CIPR is located within POLIS: The Centre for Social Policy Research, Research School of Social Sciences in the College of Arts & Social Sciences at the Australian National University (ANU). The Centre is funded from a range of sources, including ANU, the Australian Research Council, industry and philanthropic partners, and Australian state and territory governments.

As with all CIPR publications, the views expressed in this paper are those of the author(s) and do not reflect any official CIPR position.

Associate Professor William Fogarty
Acting Director, CIPR
POLIS: The Centre for Social Policy Research
Research School of Social Sciences
College of Arts & Social Sciences
The Australian National University, September 2024

About POLIS

The Centre for Social Research and Methods has been rebranded as ***POLIS: The Centre for Social Policy Research***. As part of this change, the Centre for Aboriginal Economic Policy Research (CAEPR) has joined POLIS and is being renamed the **Centre for Indigenous Policy Research**.

POLIS – which draws from the Ancient Greek for the administrative centre of the City-State – is designed to provide a designated space at the ANU for discussion, debate and research on the formulation of social policy. The rebrand will allow POLIS to better capture and market the key work of the centre in providing research and expertise on social policy in response to community and federal and state/territory government needs and requirements.

POLIS delivers exceptionally robust data and evidence driven insights into the key challenges facing contemporary Australia. This provides the foundational cornerstones of informed social policy development amongst leading stakeholders within our modern policy: government, community groups, business representatives, and educators.

POLIS is home to seven research centres:

- Centre for Indigenous Policy Research
- Centre for Social Research
- Centre for Educational Equity
- Centre for Crime and Restorative Justice
- Centre for Gambling Research
- Centre for Data, Analytics, and Evaluation
- Social Impact Hub

About CIPR

CIPR is a unique social science research organisation and is a leading research centre on Aboriginal and Torres Strait Islander policy issues. Since being established as the Centre for Aboriginal Economic Policy Research (CAEPR) in 1990, CIPR has established an unrivalled reputation and outstanding track record in complex and challenging public policy debates of national significance. CIPR is recognised for expertise in applied policy research and analysis, place-based action policy research, and community-led evaluation with Aboriginal and Torres Strait Islander peoples and organisations, Australian federal, state, and territory governments, and international agencies.

A central goal of CIPR is to continue to build long-term partnerships with Aboriginal and Torres Strait Islander stakeholders, with a view to supporting and working with key individuals and organisations in the areas of research, education, and policy development.

Commissioned Report No. ##/2024

DOI XXXX

For a complete list of CIPR publications, see https://caepr.cass.anu.edu.au/research/publications

Centre for Indigenous Policy Research
POLIS: The Centre for Social Policy Research
Research School of Social Sciences
College of Arts & Social Sciences
The Australian National University

Suggested citation:
Author1, A., Author2, B. & Author3, C. (20xx), *Title* (Commissioned Report No. ##), Centre for Indigenous Policy Research, Australian National University. https://doi.org/########

Summary of the Final Report Reviewing Methods for Assessing Progress Towards Closing the Gap

V. Cooms, F. Markham, B. Harrap, J.R. Bray, W. Su, E. Shiosaki, Y. Dinku, D. Howard-Wagner, N. Biddle, P. Somboonsin, and M. Yap

Abstract

This report summarises the research team's Commissioned Report titled *A review of methods for assessing progress towards Closing the Gap: Final Report*. It aims to make the main findings of that lengthy report accessable in a shorter format. For more details, please refer to the main report available from http://xxxxxxxx.

The report reviewed how the Productivity Commission measures progress towards the targets of the National Agreement on Closing the Gap. The study aimed to evaluate the current methods for tracking national targets, create a framework for assessing state and territory contributions, and test the revised approach using existing data.

The review identified problems with the data used to measure progress. These issues include data gaps, infrequent collection, delays in reporting, and concerns about cultural suitability. This results in outdated and culturally inappropriate information, which hinders effective monitoring and weakens accountability. Additionally, inconsistencies in data sources lead to significant revisions, affecting the reliability of progress assessments.

The report also suggests improvements to the statistical methods used to assess progress under the National Agreement. However, these improvements are considered secondary to the data issues identified.

Finally, the review describes a method for evaluating state and territory contributions to national targets. We recommend a method that aims to align with the principles of the National Agreement on Closing the Gap, and assessment state and territory progress towards contributions using jurisdictional data.

Contents

Tables

Executive Summary

The Centre for Indigenous Policy Research was commissioned by the Productivity Commission to conduct a thorough examination of the methods used to assess progress towards the targets established under the National Agreement on Closing the Gap. The aims of this examination were to:

1. evaluate the effectiveness and robustness of the current methodology, identifying areas for improvement, and proposing revisions where necessary.
2. develop a comprehensive framework for determining adequate contributions of individual states and territories required achieve the national targets.

Under articles 88 and 89 of the National Agreement, the Productivity Commission is tasked with 'reporting on targets' to 'show progress to close the gap'. The purpose of this public monitoring is to 'help inform whether parties are on track to meet the targets'. In reporting on progress, the Productivity Commission publishes statistical assessments of whether targets are 'on track' to be met at the national level. This is crucial to the 'independent oversight and accountability of progress' of the National Agreement (article 115), with parties committed to 'undertaking actions if a target is not on track to be achieved' (article 91).

Findings: Data issues are key

We found that the data used to monitor progress are not fit for purpose for many of socio-economic targets in the National Agreement. Specifically:

- Many targets and/or data collection methods are not culturally relevant or culturally safe.
- Data for several targets are not updated frequently, meaning there is no accountability during for periods of years (article 115). Accordingly, actions to get progress back on track will not be triggered as per article 91.
- Certain targets are unmeasurable due to a lack of systematic data collection, meaning progress cannot be monitored and actions to get progress back on track will not be triggered.
- The Dashboard may report impossible outcomes. For example, the Dashboard currently reports that '101.8% of Aboriginal and Torres Strait Islander children in the Year Before Fulltime Schooling (YBFS) age cohort were enrolled in a preschool program'.
- Data are often not reported at regional and local geographical scales or among policy relevant subgroups which are useful to Indigenous communities.

Required action

If the agreement is to provide real accountability, these data issues need to be urgently addressed, as outlined in Recommendations 1, 2, 4, 5, 6, 7, and 8. The data issues are much more significant than the issues identified with the statistical method used for assessing progress. However there is still room for the statistical method to improve:

- To meet best practice principles, the assessment of progress should be undertaken by a new Bureau of Indigenous Data (Recommendation 3).
- There is a serious disconnect between government policies and the Productivity Commission's method for measuring that progress. All jurisdictions should include in their implementation plans a clear, quantified connection between how and when their actions will contribute towards meeting the targets. This would allow for a more direct form of monitoring that can be used to hold parties to account for the success or failure of their policies in meeting the targets.
- There is often so little data available for a target that the assumptions of the current statistical method for measuring progress are not met. Improving data quality and collection frequency would mitigate this problem. However, tweaking the current method would go some way to improving this limitation (Recommendation 9).
- Our proposed alternative method presents a substantive improvement over the current method by making fewer assumptions about the data and better communicating uncertainty around whether current progress is

likely to result in the targets being met (Recommendation 10). Improving shortcomings with data should be prioritised, however.
- There is considerable room for improvement in how progress is communicated to the public via the Dashboard. To enhance accessibility and accountability, there should be greater emphasis on the likelihood that a target will be met in the target year. There should accordingly be a reduction in the visual complexity of the Dashboard landing page (Recommendation 11).
- We provide several options for calculating adequate state and territory contributions towards meeting the national targets and describe a specific method that we think is most suitable for this goal (Recommendation 12).

Recommendations

Recommendation 1: That a process for auditing the cultural relevance and safety of target data and data collection processes be undertaken as part of the first Independent Aboriginal and Torres Strait Islander-led review of the National Agreement on Closing the Gap.

Recommendation 2: That the Partnership Working Group consider the suitability of the current disaggregations for representing the diversity of Indigenous circumstances. That the Partnership Working Group consider requesting that the Productivity Commission assess the adequacy of progress towards meeting targets among different disaggregated Indigenous population groups.

Recommendation 3: That Parties to the National Agreement on Closing the Gap commit to establishing a Bureau of Indigenous Data with responsibilities including the work of assessing progress towards meeting socioeconomic targets under the National Agreement, including reporting and data governance.

Recommendation 4: That parties to the National Agreement leverage existing data sources to monitor Targets 3, 10, 11, and 12 using via the Person Level Integrated Data Asset to avoid the biased and at times mathematically impossible observations that result from the numerator–denominator mismatch.

Recommendation 5: That the ABS consider producing estimates of Indigenous life expectancy more frequently than every five years.

Recommendation 6: That parties to the National Agreement leverage existing data sources to monitor Targets 5, 6, 7, 8 and 9A annually using the Person Level Integrated Data Asset to increase the currency of assessments of progress

Recommendation 7: That the Australian Government resource data collection for Target 4 at least biennially.

Recommendation 8: That the Australian Government urgently address the collection of data for Targets 9B, 13, 16 and 17, including the provision of appropriate resourcing.

Recommendation 9: That, if the current method is retained, the Productivity Commission change the statistical test used to determine if a target is changing over time.

Recommendation 10: That the Productivity Commission consider adopting the alternative approach to assessing progress towards meeting targets that can better represent the uncertainty of the assessment and that can take advantage of additional information about variation in the measure.

Recommendation 11: That the Productivity Commission consider a visual redesign of the Dashboard and Annual Data Compilation Report be undertaken. If the alternative method is used, then focus on the probability of a target being met in the target year. If the current method is retained: gives a greater visual prominence to the confidence levels of the assessment, and to the currency of the assessment; represents assessments visually with greater consistency; and includes both the assessment and confidence in a single visual icon.

Recommendation 12: That the ‘equal relative improvement with constrained outliers’ option is used to devise state and territory contributions and trajectories, weighting populations according to official 2021 population estimates.

Purpose and Scope of the Review

Summary report

This document is a summary report, summarises the research team's lengthy Commissioned Report *A review of methods for assessing progress towards Closing the Gap: Final Report*. It aims to make the main findings of that lengthy report accessible in a shorter format for public sector officials and decision-makers in the Indigenous community-controlled sector. For the full study findings, please refer to the main report available from http://xxxxxxxx.

Purpose

The purpose of this review is to conduct a thorough examination of the methods employed by the Productivity Commission to assess progress towards the targets established under the National Agreement on Closing the Gap. The ANU was asked to evaluate the effectiveness and robustness of the current methodology, identify areas for improvement, and propose revisions where necessary. Additionally, the review aims to develop a comprehensive framework for determining adequate contributions of individual states and territories to the achievement of these national targets. The ultimate goal is to enhance the reliability of progress assessments and the monitoring process.

The purpose and scope of the review is summarised below (with the full terms of reference listed in the Final Report).

Evaluation of the current method and development of an alternative method

The paper conducts a detailed assessment of the current method used by the Productivity Commission to track progress towards the 19 national targets on the Dashboard and in its annual Data Compilation report. This includes examining the cultural relevance and safety of the methods, the statistical techniques employed, and the adequacy of the data sources. An alternative statistical method is developed that we believe provides a more robust technique for assessing and communicating progress towards the Closing the Gap targets. The review tests the alternative method against the existing data on progress towards Closing the Gap.

Cultural and practical suitability of data for monitoring progress

As part of this assessment, the team opted to examine issues relating to the data used to monitor progress towards the Closing the Gap targets. The report highlights significant issues with the current data, such as gaps, infrequent collection, delays in reporting, and concerns about cultural suitability. In doing so, we went beyond our terms of reference. We did this because the suitability of data — not statistical methods — is the single most important problem with the current arrangements for monitoring progress towards targets. These issues are critical to the reliability of progress assessments and are considered in the recommendations for improving the methodology.

Determining adequate State and Territory Contributions

The review develops a framework for assessing the adequacy of individual states and territories contributions to meeting the overall national targets. This involves analysing different calculation options for determining adequate contributions. We tested these frameworks on the current data to assess their suitability for this purpose. This testing is aimed at validating the reasonableness of the proposed state and territory adequate contributions and ensuring that they can be reliably applied to future assessments.

Scope

The primary focus of the report is on the technical aspects of the current methodology. Broader policy issues, while acknowledged, are not the main focus and are considered supplementary to the primary objectives. Although the report addresses issues of practical suitability and cultural relevance and safety of the data, these concerns were not part of the original terms of reference. They are included because they are critical to the effectiveness of the assessment methods but are not fully explored within the review.

Content of the Final Report

The final report is organised into six chapters. Its key findings are summarised in this short summary report.

Chapter 1: Introduction and Background

Chapter 1 sets the stage for the report by providing an introduction to the National Agreement on Closing the Gap and the broader context in which it was developed. This chapter explains the origins of the Closing the Gap initiative, which began in 2008, and highlights the significant changes introduced with the 2020 National Agreement. The chapter also outlines the role of the Productivity Commission in monitoring progress towards these targets and the reasons why this review of their methods was commissioned.

Chapter 2: Overview of the Current Approach

Chapter 2 provides a detailed summary of how the Productivity Commission currently assesses progress towards the Closing the Gap targets. It begins by outlining the 19 targets set under the National Agreement and then explains the method the Commission uses to evaluate whether these targets are being met. This includes how data is collected, analysed, and interpreted to determine if progress is on track, and how results are presented to the public.

Chapter 3: Review of the Existing Method

Chapter 3 takes a critical look at the current method for assessing progress, examining it from both a cultural and technical perspective. The chapter begins with an assessment of how well the current method aligns with Indigenous cultural values and whether it is safe and respectful for Indigenous communities. The chapter also describes the challenges and limitations of the current data, including the timeliness and frequency of data collections. It then moves on to a technical evaluation, where it assesses the robustness of the statistical techniques used and the reliability of the data sources. This chapter also explores whether the current method is effective in providing meaningful insights and whether it can accurately measure progress towards achieving the targets.

Chapter 4: Exploring an Alternative Method

In Chapter 4, the report introduces and explores an alternative statistical method for assessing progress towards the Closing the Gap targets. This new approach is proposed as a way to address the shortcomings identified in the existing method. The chapter explains how the alternative method works, including the types of data and analyses it uses. It also discusses the potential benefits of this new approach, such as improved accuracy and relevance, as well as any challenges or limitations that might arise from implementing it.

Chapter 5: Assessing State and Territory Contributions

Chapter 5 focuses on how the contributions of individual states and territories to the national targets can be assessed. The chapter presents four different options for evaluating these contributions and explains how each option takes into account the unique circumstances and starting points of different regions. The chapter also discusses how existing data was used to test these options and compares the results. This analysis helps determine which method might be the most effective in measuring how states and territories are helping to achieve the national targets.

Chapter 6: Conclusions and Recommendations

In the final chapter, Chapter 6, the report brings together all the findings from the previous chapters. It summarizes the key insights and issues identified throughout the report and offers specific recommendations for improving the assessment of progress towards the Closing the Gap targets. These recommendations are aimed at enhancing both the technical robustness and cultural relevance of the methods used, ensuring that future assessments are more accurate, meaningful, and aligned with the needs of Indigenous communities.

Background

Why assess progress towards Closing the Gap targets?

The purpose of assessing progress towards the Closing the Gap targets is to ensure that the goals set under the National Agreement are being met. This process helps to track whether the efforts of governments are effective in meeting the targets described in the National Agreement on Closing the Gap. By regularly monitoring progress, it becomes possible to identify areas where improvements are not being made rapidly enough — or where things are worsening —and for governments to take timely actions to address any shortcomings. This assessment is crucial for keeping governments accountable and ensuring that the commitments made in the National Agreement on Closing the Gap are being fulfilled.

Another key purpose of these assessments is to provide clear and reliable information that can guide decision-making. The data collected and analysed through this process helps inform governments, communities, and other stakeholders about whether current approaches are working and or not. This allows for adjustments in strategies and policies to ensure that the targets are achievable and aligned with the needs and aspirations of Indigenous Australians. Ultimately, the goal is to ensure that the Closing the Gap initiative leads to real and meaningful improvements in the lives of Indigenous people across Australia.

The role of the Productivity Commission

Under the National Agreement, the Productivity Commission plays a key role in ensuring that progress towards the Closing the Gap targets is accurately measured and reported. It is responsible for developing and applying the methods used to assess whether the targets are on track to be met. By analysing data provided to it by other government agencies, the Productivity Commission provides clear statements into whether or not adequate progress is being for the Closing the Gap targets to be met. This role is essential for maintaining transparency and accountability in the implementation of the National Agreement.

In addition to assessing progress, the Productivity Commission makes its findings publicly available through an online Dashboard and annual Data Compilation Report. This platform allows governments, communities, and the public to see whether targets are being achieved. By offering these assessments, the Productivity Commission helps guide actions and policies, ensuring that they are informed by reliable data and aligned with the overall goals of the National Agreement. Specifically:

> *88. The reporting on targets will show progress to close the gap, relative to non-Indigenous Australians. National trajectories for each numeric target will be published on the Closing the Gap website on commencement of this Agreement and subsequently on the Productivity Commission Dashboard following its development. These will show the expected rate of progress and help inform whether parties are on track to meet the targets.*
>
> *89. Available baseline data for each state and territory will be published on the Closing the Gap website on commencement of this Agreement and subsequently on the Productivity Commission Dashboard following its development to enable monitoring of each jurisdiction's progress and contribution towards achievement of targets under this Agreement. The Productivity Commission will also publish baseline data for any new target agreed under this Agreement.*

The dashboard is limited to those targets and indicators for which there is available data. The Productivity Commission is not responsible for deciding on which data is to be collected to monitor progress towards the targets. It is also not responsible for collecting these data.

Assessment of the current method and data for assessing progress

Shortcomings of the data used to assess progress

The single most important finding of the review is that *the most significant shortcoming with current monitoring arrangements the Closing the Gap targets are with the data used to monitor progress*.

Cultural relevance and safety of the data used to monitor progress

In reviewing the Productivity Commission's method for assessing progress towards Closing the Gap targets, significant issues regarding the cultural relevance and safety of the data used were identified. These concerns are critical, as the effectiveness of any assessment method is undermined if the data it relies on is not culturally appropriate. The review highlighted several problems with the current data. *Most important is the reliance on mainstream measures designed for non-Indigenous populations, which do not adequately reflect Indigenous understandings of health, education, and wellbeing*. For example, the target to increase Year 12 attainment among Indigenous youth might conflict with cultural priorities that value education outside the formal school system, such as learning on Country.

Additionally, the data collection process itself raises concerns. For instance, data for monitoring family violence rates among Indigenous women and children have been gathered through household surveys that may not be culturally safe. Such methods can result in unreliable data and may breach ethical standards, potentially causing harm rather than helping. Although new initiatives, like the First Nations-led data collection on domestic violence, are a step in the right direction, this example underscores the need for a broader review of the data used to assess progress.

Conducting an audit of these data collections and indicators is necessary to ensure they align with the aspirations of Indigenous peoples and are collected in a culturally safe manner. While such an audit could lead to changes in the framework of the National Agreement, the potential benefits—such as avoiding harm and ensuring government policies are effective—far outweigh the risks. With the agreement already nearing halfway towards the expiry of most targets in 2030 or 2031, this review should be prioritised to enhance the reliability and cultural appropriateness of progress assessments moving forward.

Practical problems with data

Timing issues with data collection and publication stymie the usefulness of the Productivity Commission's monitoring efforts. The frequency and delay in data collection can create gaps in reporting, making it hard to know if progress is being made. Some targets, like those derived from annual data, allow for regular monitoring. However, others, such as those based on the five-yearly Census, result in very long gaps between updates. For example, Target 8 (employment) may have a reporting gap of up to six years, meaning the most recent data is often too old to inform current policy decisions effectively. These delays hinder timely responses to emerging issues (as per Article 91 of the National Agreement) and impair Indigenous peoples' ability to hold governments accountable. *Reducing these data gaps by increasing the frequency of data collection or developing new data sources is critical to the monitoring effort.*

Another significant issue arises when different data sources are used to calculate the numerator and denominator for some targets. For example, Targets 3, 10, 11, 12, and 14 rely on administrative data for the numerator and ABS population projections for the denominator. This mismatch can lead to inaccurate

calculations. For instance, in Target 3, the number of Indigenous children enrolled in early childhood education (the numerator) is compared to an estimated population of eligible children (the denominator). However, these population estimates are often outdated and don't account for non-demographic growth, leading to impossible results, such as enrolment rates exceeding 100%. This can mislead policymakers and the public, making it difficult to accurately monitor progress.

Some targets suffer from a lack of systematic data collection altogether. For instance, Target 9B (essential services) currently lacks *any* relevant data, as the previous survey, CHINS, has not been conducted since 2006, well before the signing of the National Agreement in 2020. Similarly, Targets 13 (family violence) and 17 (digital inclusion) rely on surveys that are not conducted regularly, making it difficult to monitor progress effectively. Irregular data collection cycles, such as the eight-year gap between National Indigenous Languages Surveys (NILS) for Targets 16A and 16B, are not suitable for timely monitoring. Addressing these gaps requires urgent action and appropriate resourcing to ensure that data collection is regular and reliable.

The ability to disaggregate data is also crucial for reflecting the diverse circumstances of Indigenous peoples in Australia. While some data is already disaggregated by gender, disability, and remoteness, *there is a need for more detailed regional breakdowns*. This would allow for more targeted policy interventions and better support for local decision-making. Integrating existing data sources with the Person Level Integrated Data Asset (PLIDA) could enhance the capacity for disaggregation, providing more relevant and actionable insights into progress across different population sub-groups and geographies.

Shortcomings with the current method for assessing progress

A disconnect between the method for monitoring and the plans of governments

The review identified *a serious disconnect between the implementation of policies and programs by governments to make progress towards targets and the Productivity Commission's method for measuring that progress*. The framework outlined in the National Agreement does not provide the Productivity Commission with the detailed information about the specific policies and resources being used to meet targets, and their expected results. This gap limits the ability to create accurate progress trajectories based on policy actions. Instead, the current method used by the Productivity Commission assumes that progress towards targets will be consistent and linear from the baseline year to the target year. However, in reality, progress is rarely linear. The journey between allocating resources towards the targets and achieving improvements may be long and winding. Sometimes, initial policies may yield quick results, but further progress becomes more difficult. In other cases, significant progress might not be seen until later years, after planning and implementation have had time to take effect.

A more effective approach would be for jurisdictions to include in their implementation plans clear expectations about how their actions will influence target outcomes and when these changes are expected to occur. These policy-driven trajectories would likely be non-linear, reflecting the true nature of policy impacts over time. Such an approach would not only align progress monitoring with actual policy actions but also enhance accountability, encouraging jurisdictions to develop realistic and measurable plans. Without detailed planning and policy-driven trajectories, the assumption of linear progress towards targets, using straight-line trajectories as a default method is currently the best option, as it involves the fewest assumptions about future progress. However, this approach does not accurately reflect the complex, non-linear nature of policy impacts, potentially limiting the effectiveness of progress monitoring under the National Agreement.

Cultural relevance and safety of the method used to monitor progress

The Productivity Commission's approach has several shortcomings in aligning with Indigenous practice principles. Although the Commission has worked with the Partnership Working Group (PWG) on the assessment method, it falls short of fully embracing Indigenous leadership. This falls short of international standards regarding Indigenous self-determination. *While Productivity Commission prioritises the views of the Coalition of Peaks, this does not always translate into true Indigenous leadership in decision-making*. The origin of this shortcoming lies largely in the National Agreement itself.

The method also inadequately addresses Indigenous diversity. It is not specifically designed to reflect the diverse experiences and needs of different Indigenous populations. Progress is reported in broad groupings, but there is little focus on regional Indigenous areas or specific cultural groups. This lack of nuanced disaggregation means the method does not effectively represent the varied realities of Indigenous communities.

Additionally, there is a lack of Indigenous governance over data monitoring processes, which limits the relevance and cultural appropriateness of the assessments. The current approach, where the Commission handles these responsibilities, does not align with the principle of Indigenous data sovereignty. *The recommendation by the Productivity Commission in its Review of Closing the Gap to establish a Bureau of Indigenous Data is strongly supported* to ensure that assessments of progress are compatible with Indigenous rights standards, and centre Indigenous knowledge and leadership.

Shortcomings of the current statistical technique

The review identified some shortcomings of the statistical method currently used by the Productivity Commission to assess progress. The Productivity Commission currently uses the Likelihood Ratio (LR) test to determine whether measurements of target outcomes are changing or not. This test compares a linear regression model (indicating change over time) with a null model (indicating no change). While standard in statistical procedures, there are concerns about its appropriateness with sample samples. Specifically, the LR test relies on a chi-square distribution, which works best with large sample sizes. When applied to tiny samples, such as only two data points, the test might fail to distinguish between real change and no change, leading the Productivity Commission to use a non-standard high *p*-value threshold (0.5) for a 'no change' assessment instead of the usual $p < 0.05$.

To address these challenges, *the report suggests that the sample size be increased improving the frequency and timeliness of data reporting, a change which would make the current statistical issues far less significant*. Another option is to eliminate the 'no change' assessment category entirely, as it's unlikely that progress towards the targets would remain unchanged over time (except in specific cases like Target 16B, where no change is more plausible). Lastly, if retaining the 'no change' category, the Spearman's Rank-Order Correlation Test could be a better statistical method, especially for small samples, as it does not rely on approximations that can be unreliable with limited data.

Additionally, *there is significant data uncertainty that complicates the assessment of progress towards targets and which the current method addresses only moderately well*. This variability comes from various sources, such as the rarity of events measured by some targets, survey sample variation, external factors like Covid-19, and potential errors in administrative data. The current method uses linear regression to estimate trends and predict future outcomes, but this approach has limitations. For instance, with few data points, the method is poorly suited for assigning confidence levels to assessments. As a result, some targets might be labelled 'use with caution' throughout the agreement's life, even when they consistently trend upwards. The current approach doesn't incorporate additional information about data variability, such as sample-based confidence intervals. An

alternative assessment method that better represents uncertainty and utilises all available data, including historical variability, is explored later in the report.

Communication to a broad audience

The review of the method's ability to communicate effectively with a broad audience highlighted two main observations. First, although the method is complex and requires an advanced understanding of statistics to understand its mechanics (and much of the final report), this does not hinder meaningful communication. The classification into categories such as 'worsening' or 'improvement and on track,' and confidence levels like 'use with caution,' simplifies the interpretation of complex statistical judgements into easily understood dimensions. *Users do not need to grasp the method's mechanics to engage meaningfully with its output*.

However, the second observation identified significant shortcomings in how these assessments are communicated, particularly on the Dashboard and in the annual data compilation report. The confidence ratings, crucial for understanding progress towards the Closing the Gap targets, are not prominently displayed. For instance, on the Dashboard, warnings that progress assessments should be 'used with caution' due to limited data points are buried in a visually crowded page, likely unnoticed by users. Even when confidence levels are reported, they are presented as text rather than icons, reducing their visibility compared to progress assessments.

Second, the Dashboard landing page is currently crowded with icons and text. This obscures the key information about whether or not targets are on track to be met. By refocusing on this single most important piece of information, users would immediately know whether targets are on track or not, with more detailed data available upon further exploration. This approach would enhance the clarity and effectiveness of the Dashboard and the annual report in communicating progress toward the targets.

An alternative statistical method for assessing progress

Many of the shortcomings identified in the previous section cannot be alleviated by changing the method of statistical analysis and instead require significant data development. However, the review team developed a new, alternative statistical method for assessing progress that mitigates some of the statistical shortcomings with the current method. The current method, which is based on linear regression, has several statistical shortcomings:

1. It relies on strict assumptions about the data and how it's estimated, which often don't hold true in real-world situations, especially when the sample size is small. This can lead to predictions that are overly confident.
2. It doesn't provide much information about the range of possible outcomes in the target year or how likely they are to happen.
3. It is difficult to adjust the current method to account for uncertainty in the data, such as when data is based on samples or is provided with variability bands.
4. It might produce impossible estimates, such as predicting that more than 100% of eligible Indigenous children will be enrolled in early childhood education in the target year.
5. It is not easily adaptable to certain targets that have unique characteristics. For example, any method should understand that some targets like legal interests in land and seas (Targets 15A and 15B) only increase over time, unlike most targets which can improve or worsen from year to year.

Summary of the alternative method

The alternative method introduced in this chapter builds on the same basic trajectories as the current method used by the Productivity Commission but offers several key improvements:

1. It provides assessments of the probability that a target will be met by the target year, using a probability and categories: 'very likely to be met', 'likely to be met', 'about as likely as not to be met', 'unlikely to be met' and 'very unlikely to be met'.
2. It simultaneously assesses the probability of all outcomes in the target year: 'target met', 'improved but not met', 'no noticeable change', and 'worsened'.
3. It includes historical data variability in its probability assessments, giving a more accurate picture of the likely uncertainty of assessments.
4. It is highly flexible, and so can include additional information about uncertainty in the data (such as variability bands or confidence intervals) or additional constraints (such as that Target 15 should only increase over time, or that an enrolment rate cannot exceed 100%).
5. It avoids using statistical tests that don't work well with uncertain data or very small samples.
6. It provides an outcome of 'no noticeable change' which is interpreted as an estimate of the probability that there will have been no noticeable change in the outcome by the target year, rather than the current method's outcome of 'no change' which should be interpreted as a finding that there currently insufficient evidence to know if the outcome is improving or worsening.

The method produces three 'levels' of information to be displayed on the Dashboard or in the Annual Data Compilation Report, with the first level presenting the most important information as simply as possible, and the last level presenting complicated information in full. The single most important piece of information for each assessment is a likelihood term describing the probability of whether or not the target will be met in the target

year. This should be presented on the front page of the Dashboard and data compilation. The second most important piece of information is whether the outcome is likely to have improved, not changed, or worsened by the target year. The third most important piece of information is the likelihood term (and perhaps probabilities) for all four outcome categories.

The alternative method uses a simulation-based, non-parametric approach. Instead of predicting future trends with a regression model, it simulates various scenarios, the probability of which is based on data observed since the baseline and variability from before the baseline year. This allows for more accurate confidence levels to be estimated while making fewer assumptions than the current method.

The key idea is that future growth rates for the target indicators will be similar to those observed in the past. The method simulates future values by randomly drawing growth rates from a distribution based on past growth rates. These growth rates are calculated from the data for observed targets, with the mean growth rate in the simulations matching the mean observed growth rates since the baseline. The standard deviation in the simulation is set to reflect the variation in growth rates across all observed data, including the period before the baseline.

Full details of the proposed alternative method are provided in Chapter 4, with code to implement the alternative method in R available on request.

Comparison of the performance of alternative and current methods

A comparison of the performance of the alternative method and the current method is presented in Table 1 below. The information presented for the alternative method is consistent with the top and second level information identified earlier, where the probability of meeting the target is reported, followed by the most likely direction of change. In general, the outcomes are concordant between the current and alternative method, however some targets are different, specifically targets 2 (healthy birthweight) and 11 (child detention). Under the current method, Target 2's outcome is reported as 'on track' with a 'low' degree of confidence. But under the alterative method, it is assessed as 'about as likely as not' to be met in the target year. This demonstrates how the alternative method incorporates uncertainty about outcomes into the main assessment itself. Target 11 is reported as 'no change' under the current method, with a note that this assessment should only be used with caution. Under the alternative method, Target 11 is reported as being unlikely (30%) to have be met in the target year, but likely to have improved since baseline (77%). This partly reflects differences in the understanding of the concept of 'no change' between the two methods, with the current method interpreting 'no change' in terms of uncertainty regarding the existence of a trend, and the alternative method interpreting 'no noticeable change' in terms of the probability of the outcome not changing between the target year and the baseline year. *Ultimately, the practical improvements offered by the alternative method do not radically change the assessment of progress toward Closing the Gap targets. The improvements to monitoring offered by the alternative method — while desirable — are minor when compared to the improvements to monitoring that would result from the timely provision of culturally suitable data as outlined above.*

Table 1: Comparison of the results of the current method and the alternative method

Target				Current method			Alternative method	
N	**Short name**	**Baseline value**	**Target value**	**Value in target year**	**Assessment**	**Confidence level**	**Probability of meeting the target**	**Most likely direction of change**
1	Life expectancy (female)	8.6 years	0.0 years	6.7 years	Improving but not on track	Caution	Very unlikely (<10%)	Improved since baseline (86%)
1	Life expectancy (male)	11.4 years	0.0 years	6.5 years	Improving but not on track	Caution	Very unlikely (<10%)	Improved since baseline (>90%)
2	Healthy Birthweight	89.0%	91.0%	91.2%	On track	Low	About as likely as not (65%)	Improved since baseline (>90%)
3	Preschool enrolment	76.7%	95.0%	110.3%	On track	High	Very likely (>90%)	Improved since baseline (>90%)
4	Child development	35.2%	55.0%	31.4%	Worsening	Caution	Very unlikely (<10%)	Worsened since baseline (68%)
5	Year 12 attainment	63.2%	96.0%	77.9%	Improving but not on track	Caution	Very unlikely (<10%)	Improved since baseline (>90%)
6	Tertiary qualification	42.3%	70.0%	56.5%	Improving but not on track	Caution	Very unlikely (<10%)	Improved since baseline (>90%)
7	Youth engagement	57.2%	67.0%	59.7%	Improving but not on track	Caution	Very unlikely (<10%)	Improved since baseline (79%)
8	Employment	51.0%	62.0%	65.1%	On track	Caution	Likely (84%)	Improved since baseline (>90%)
9A	Overcrowding	78.9%	88.0%	86.5%	Improving but not on track	Caution	Unlikely (25%)	Improved since baseline (>90%)
9B	Essential Services	Unknown	100%	n/a	n/a	n/a	n/a	n/a
10	Incarceration	2,142.9 per 100,000	1,821.5 per 100,000	2,483.8 per 100,000	Worsening	Low	Very unlikely (<10%)	Worsened since baseline (>90%)
11	Child detention	32.0 per 10,000	22.3 per 10,000	28.0 per 10,000	No change	Low	Unlikely (30%)	Improved since baseline (77%)
12	Out-of-home care	54.2 per 1,000	29.8 per 1,000	63.0 per 1,000	Worsening	High	Very unlikely (<10%)	Worsened since baseline (>90%)
13	Family violence	8.4%	4.2%	n/a	n/a	n/a	n/a	n/a
14	Suicide	25.1 per 100,000	6.3 per 100,000*	37.6 per 100,000	Worsening	High	Very unlikely (<10%)	Worsened since baseline (>90%)
15A	Land rights or interests	3.91 million km^2	4.50 million km^2	4.21 million km^2	On track	Caution	Very likely (>90%)	Improved since baseline (>90%)
15B	Sea rights or interests	90,252 km^2	103,790 km^2	106,872 km^2	On track	Caution	Very likely (>90%)	Improved since baseline (>90%)
16	Languages spoken	123	> 123	n/a	n/a	n/a	n/a	n/a

16	Languages spoken strongly	14	> 14	n/a	n/a	n/a	n/a	n/a
17	Digital inclusion	Unknown	0% gap	n/a	n/a	n/a	n/a	n/a

Determining adequate state and territory contributions

The review provides options for assessing how well states and territories are contributing to achieving the national targets set in the National Agreement on Closing the Gap. The goal is to provide the Productivity Commission with methods to determine whether each state or territory is 'on track' to make a sufficient contribution by the target year. To ensure consistency, these methods are designed to align with both the current and alternative methods discussed in earlier chapters. The review focuses on developing a way to calculate the minimum adequate contributions each jurisdiction should make to meet national targets. While ideally, state and territory progress would be closely linked to their specific policies, this is difficult to achieve without systematic plans from each jurisdiction detailing their contributions. Therefore, the chapter proposes an objective method that assumes a straight-line trajectory from baseline to target. Setting these targets and trajectories is crucial for two reasons: they hold states and territories accountable for their efforts, and they help identify where national policies may be falling short.

Four options were developed and tested in the Final Report. However, only the preferred option is presented in this summary report as the authors believe that is superior to the other options. We took a principles-based approach to determining state and territory minimum adequate contributions and trajectories that respects the consensus reached in the National Agreement. Specifically, Article 83 states that:

> *Government Parties agree that targets are designed to be met at a national level, while recognising that starting points, past trends and local circumstances differ so jurisdictional outcomes may vary.*

In addition, we believe that the following constraints are reasonable and desirable when formulating state and territory minimum adequate contributions and trajectories:

1. No state or territory minimum adequate contribution should represent a worsening of outcomes from baseline.
2. No state or territory minimum adequate contribution should exceed mathematically possible bounds (e.g. no target should be set at greater than 100%).
3. If every state and territory minimum adequate contribution is precisely met, then the national target will also be precisely met.

The preferred method for determining state and territory contributions

The preferred methodology determines state and territory contributions based on the idea that outcomes in each state and territory should see the same 'percentage growth' as is set in the national target. An improvement in employment rates can be described in two ways: percentage point change and percentage growth. A *percentage point change* simply measures the difference in the rate itself. So if, for example, if the employment rate goes from 51% to 62%, that's an 11 percentage point change. It is calculated as the difference between the two rates. A *percentage growth change* looks at how much the employment rate has grown in relation to where it started. For example, if the employment rate goes from 51% to 62%, the percentage growth is approximately 21.57% This is because 11 (the increase) is 21.57% of 51 (the baseline rate). The methodology determines targets based on applying the national percentage growth rate to state and territory baseline values.

One complication is that it does so by focusing on the percentage growth rate at which negative outcomes are reduced rather than the percentage growth rate at which positive outcomes are increased. This is done because it results in achievable state and territory contributions being determined.

These determinations are then balanced out to ensure that the three principles listed above hold true. In some cases, this involves adjusting the adequate contributions slightly. A further constraint is also added in this adjustment process where possible, which is that no state or territory's contribution is an 'outlier' relative to the others', even when that jurisdiction's starting point is well behind the others. In these rare cases, the outlier contribution is brought back to within the two standard deviations of the mean contribution in other jurisdictions. In the Final Report, this preferred method is described as the 'equal relative improvement with constrained outliers' option.

This approach strikes a balance between two extremes: one where every state or territory is expected to reach the same outcome in the target year, and another where every state or territory is expected to make the same amount of progress in percentage point terms. In the first extreme, every jurisdiction — regardless of starting point — would be expected to reach the national target in the target year. This means that states or territories with poorer starting points would have to make huge leaps to catch up with others, which might not be realistic. On the other hand, the other extreme asks every state or territory to make the same amount of progress in percentage point terms, no matter where they started. This could be seen as unfair because it expects jurisdictions that are close to the national target in the baseline year to significantly exceed the national target. The preferred option aims to find a medium between these extremes. It recognises that states or territories starting further behind should improve more than those already closer to the target. However, it doesn't demand that every jurisdiction reaches the same final result by the target year. Instead, it determines progress based on where each state or territory started, acknowledging that some will need to improve more than others, but without expecting rapid or unrealistic catch-up.

Other options

Other options for determining state and territory contributions are described and tested in the Final Report. These include the two 'extremes' noted above. We found that the state and territory contributions produced by these methods were less compatible with Article 83 of the National Agreement and the principles outlined above. Various methods of population weightings between states and territories — an input to the calculation — were also examined in the Final Report, but they were found to produce only negligible changes to results.

Assessing state and territory progress using these contributions

The final report uses the alternative method to assess state and territories' contributions towards meeting the national target, using the method described above to calculate adequate contributions. The adequate contributions, and the assessment of progress towards them to date, are reproduced here in Table 2.

Recommendations

The report makes the following twelve specific recommendations. However, its most important findings relate to significant issues with the data used to assess progress towards the Closing the Gap targets. For many targets, the time between data updates is so large that it severely limits the ability of the Productivity Commission to monitor progress in a way that provides accountability. Delays in data collection and reporting undermines the purpose of monitoring progress, makes policy decisions less effective, and fails to respect the Closing the Gap objectives and Indigenous communities. Data should be collected and reported annually, with minimal delays. In some instances, there are no available data at all, such as life expectancy figures in certain regions, or no clear plan for future data collection. Additionally, using different data sources for population calculations has led to significant revisions, further complicating progress assessments. Many of these issues could be addressed through better data development and the use of modern data linking technologies. The report also raises serious concerns about the cultural relevance of the data. These issues span multiple levels, including what the targets aim to measure, how the data are interpreted, and the ethics of data collection. These issues need further examination through an Indigenous-led process. *While the report suggests several improvements to the assessment method and the way results are presented, these are considered minor compared to the broader data issues*.

Recommendations

1. **Recommendation: That a process for auditing the cultural relevance and safety of target data and data collection processes be undertaken as part of the first Independent Aboriginal and Torres Strait Islander-led review of the National Agreement on Closing the Gap.**

2. **Recommendation: That the Partnership Working Group consider the suitability of the current disaggregations for representing the diversity of Indigenous circumstances. That the Partnership Working Group consider requesting that the Productivity Commission assess the adequacy of progress towards meeting targets among different disaggregated Indigenous population groups.**

3. **Recommendation: That Parties to the National Agreement on Closing the Gap commit to establishing a Bureau of Indigenous Data with responsibilities including the work of assessing progress towards meeting socioeconomic targets under the National Agreement, including reporting and data governance.**

4. **Recommendation: That parties to the National Agreement leverage existing data sources to monitor Targets 3, 10, 11, and 12 using via the Person Level Integrated Data Asset to avoid the biased and at times mathematically impossible observations that result from the numerator–denominator mismatch.**

5. **Recommendation: That the ABS consider producing estimates of Indigenous life expectancy more frequently than every five years.**

6. **Recommendation: That parties to the National Agreement leverage existing data sources to monitor Targets 5, 6, 7, 8 and 9A annually using the Person Level Integrated Data Asset to increase the currency of assessments of progress.**

7. **Recommendation: That the Australian Government resource data collection for Target 4 at least biennially.**

8. **Recommendation: That the Australian Government urgently address the collection of data for Targets 9B, 13, 16 and 17, including the provision of appropriate resourcing.**

9. **Recommendation: That, if the current method is retained, the Productivity Commission change the statistical test used to determine if a target is changing over time.**

10. **Recommendation: That the Productivity Commission consider adopting the alternative approach to assessing progress towards meeting targets that can better represent the uncertainty of the assessment and that can take advantage of additional information about variation in the measure.**

11. **Recommendation: That the Productivity Commission consider a visual redesign of the Dashboard and Annual Data Compilation Report be undertaken. If the alternative method is used, then focus on the probability of a target being met in the target year. If the current method is retained: gives a greater visual prominence to the confidence levels of the assessment, and to the currency of the assessment; represents assessments visually with greater consistency; and includes both the assessment and confidence in a single visual icon.**

12. **Recommendation: That the 'equal relative improvement with constrained outliers' option is used to devise state and territory contributions and trajectories, weighting populations according to official 2021 population estimates.**

Table 2: State and territory contributions and assessments under the alternative method

Target	Jurisdiction	Baseline value	Target value	Probability of meeting the target	Most likely direction of change
Target 1 - Females	NSW	8.6	0.0	Very unlikely (<10%)	Improved since baseline (>90%)
	NT	11.6	0.0	Very unlikely (<10%)	Worsened since baseline (89%)
	Qld	10.0	0.0	Very unlikely (<10%)	Improved since baseline (>90%)
	WA	12.9	0.0	Very unlikely (<10%)	Improved since baseline (77%)
Target 1 - Males	NSW	10.5	0.0	Very unlikely (<10%)	Improved since baseline (>90%)
	NT	14.0	0.0	Very unlikely (<10%)	Improved since baseline (55%)
	Qld	11.8	0.0	Very unlikely (<10%)	Improved since baseline (>90%)
	WA	14.7	0.0	Very unlikely (<10%)	Improved since baseline (>90%)
Target 2	ACT	88.6	90.7	About as likely as not (47%)	Improved since baseline (54%)
	NSW	90.4	92.2	Unlikely (14%)	Worsened since baseline (61%)
	NT	85.6	88.3	Unlikely (27%)	Worsened since baseline (57%)
	Qld	89.1	91.1	Likely (89%)	Improved since baseline (>90%)
	SA	88.4	90.6	Unlikely (26%)	Worsened since baseline (63%)
	Tas	88.5	90.7	Likely (74%)	Improved since baseline (81%)
	Vic	88.8	90.9	Likely (87%)	Improved since baseline (>90%)
	WA	86.9	89.4	About as likely as not (50%)	Improved since baseline (75%)
Target 3	ACT	85.4	98.3	Likely (67%)	Improved since baseline (>90%)
	NSW	60.1	88.5	Very likely (>90%)	Improved since baseline (>90%)
	NT	79.5	97.0	Very unlikely (<10%)	Worsened since baseline (>90%)
	Qld	82.2	97.6	Likely (89%)	Improved since baseline (>90%)
	SA	96.3	100.0	About as likely as not (54%)	Improved since baseline (>90%)
	Tas	90.9	99.5	Likely (72%)	Improved since baseline (>90%)
	Vic	88.1	98.9	Likely (81%)	Improved since baseline (>90%)
	WA	94.8	100.0	Likely (74%)	Improved since baseline (>90%)
Target 4	ACT	26.4	49.0	Very unlikely (<10%)	Improved since baseline (70%)
	NSW	42.2	60.0	Very unlikely (<10%)	Worsened since baseline (>90%)
	NT	18.2	43.3	Very unlikely (<10%)	Worsened since baseline (86%)
	Qld	33.5	53.9	Unlikely (10%)	Improved since baseline (53%)
	SA	29.0	50.8	Unlikely (12%)	Improved since baseline (90%)
	Tas	37.5	56.8	Very unlikely (<10%)	Improved since baseline (62%)
	Vic	35.1	55.0	Very unlikely (<10%)	Improved since baseline (81%)
	WA	31.4	52.5	Very unlikely (<10%)	Worsened since baseline (50%)
Target 5	ACT	77.4	97.9	Unlikely (29%)	Improved since baseline (>90%)
	NSW	64.3	96.5	Very unlikely (<10%)	Improved since baseline (>90%)
	NT	37.5	88.9	Very unlikely (<10%)	Improved since baseline (76%)
	Qld	69.5	97.1	Very unlikely (<10%)	Improved since baseline (>90%)
	SA	61.4	96.2	Very unlikely (<10%)	Improved since baseline (86%)
	Tas	62.7	96.3	Very unlikely (<10%)	Improved since baseline (>90%)
	Vic	69.6	97.1	Very unlikely (<10%)	Improved since baseline (>90%)
	WA	57.4	95.7	Very unlikely (<10%)	Improved since baseline (>90%)
Target 6	ACT	62.1	80.0	Very unlikely (<10%)	Improved since baseline (>90%)
	NSW	48.3	72.8	Unlikely (27%)	Improved since baseline (>90%)
	NT	18.1	57.2	Very unlikely (<10%)	Improved since baseline (67%)
	Qld	42.4	69.8	Unlikely (11%)	Improved since baseline (>90%)
	SA	39.8	68.4	Very unlikely (<10%)	Improved since baseline (86%)
	Tas	47.0	72.2	Very unlikely (<10%)	Improved since baseline (>90%)
	Vic	56.5	77.1	Very unlikely (<10%)	Improved since baseline (75%)
	WA	33.8	65.3	Very unlikely (<10%)	Improved since baseline (>90%)
Target 7	ACT	73.7	79.7	Very unlikely (<10%)	Improved since baseline (79%)
	NSW	61.7	70.4	Very unlikely (<10%)	Improved since baseline (58%)
	NT	40.0	53.7	Very unlikely (<10%)	Worsened since baseline (>90%)
	Qld	55.4	65.6	About as likely as not (39%)	Improved since baseline (90%)
	SA	57.6	67.3	Very unlikely (<10%)	Worsened since baseline (>90%)
	Tas	62.4	71.0	Very unlikely (<10%)	Improved since baseline (>90%)
	Vic	65.4	73.3	Very unlikely (<10%)	Improved since baseline (52%)
	WA	51.5	62.6	Very unlikely (<10%)	Improved since baseline (>90%)
Target 8	ACT	70.1	76.5	Likely (75%)	Improved since baseline (>90%)
	NSW	54.6	64.6	Very likely (>90%)	Improved since baseline (>90%)
	NT	35.4	49.7	Very unlikely (<10%)	Worsened since baseline (69%)
	Qld	52.1	62.6	Likely (82%)	Improved since baseline (>90%)

Target	Jurisdiction	Baseline value	Target value	Probability of meeting the target	Most likely direction of change
	SA	46.4	58.3	About as likely as not (51%)	Improved since baseline (>90%)
	Tas	59.0	67.9	About as likely as not (66%)	Improved since baseline (>90%)
	Vic	57.3	66.6	Very likely (>90%)	Improved since baseline (>90%)
	WA	44.7	56.9	Likely (71%)	Improved since baseline (>90%)
Target 9	ACT	91.6	95.9	Very unlikely (<10%)	Worsened since baseline (70%)
	NSW	85.9	92.7	Very unlikely (<10%)	Improved since baseline (>90%)
	NT	38.4	54.4	About as likely as not (61%)	Improved since baseline (>90%)
	Qld	79.4	88.9	Very unlikely (<10%)	Improved since baseline (>90%)
	SA	82.5	90.7	Very unlikely (<10%)	Improved since baseline (55%)
	Tas	89.9	95.0	Very unlikely (<10%)	Worsened since baseline (>90%)
	Vic	87.6	93.6	Very unlikely (<10%)	Improved since baseline (>90%)
	WA	75.2	86.5	About as likely as not (50%)	Improved since baseline (>90%)
Target 10	ACT	1703.9	1467.6	About as likely as not (53%)	Improved since baseline (65%)
	NSW	1868.9	1609.7	About as likely as not (39%)	Improved since baseline (78%)
	NT	2450.8	2110.9	Very unlikely (<10%)	Worsened since baseline (>90%)
	Qld	1814.5	1562.9	Very unlikely (<10%)	Worsened since baseline (>90%)
	SA	2395.5	2063.3	Unlikely (28%)	Improved since baseline (55%)
	Tas	729.7	628.5	Very unlikely (<10%)	Worsened since baseline (85%)
	Vic	2114.3	1821.1	Likely (86%)	Improved since baseline (>90%)
	WA	3581.8	3085.1	Unlikely (15%)	Worsened since baseline (53%)
Target 11	ACT	15.3	10.8	Very unlikely (<10%)	Worsened since baseline (>90%)
	NSW	22.3	15.7	About as likely as not (54%)	Improved since baseline (80%)
	NT	30.9	21.8	Very unlikely (<10%)	Worsened since baseline (>90%)
	Qld	41.2	29.1	Very unlikely (<10%)	Worsened since baseline (81%)
	SA	27.4	19.3	Very likely (>90%)	Improved since baseline (>90%)
	Tas	8.5	6.0	About as likely as not (54%)	Improved since baseline (62%)
	Vic	18.5	13.1	Very likely (>90%)	Improved since baseline (>90%)
	WA	55.1	38.8	Very likely (>90%)	Improved since baseline (>90%)
Target 12	ACT	68.5	37.3	Very unlikely (<10%)	Improved since baseline (82%)
	NSW	60.2	32.8	Very unlikely (<10%)	Improved since baseline (>90%)
	NT	36.6	19.9	Very unlikely (<10%)	Improved since baseline (>90%)
	Qld	37.0	20.1	Very unlikely (<10%)	Worsened since baseline (>90%)
	SA	75.3	41.0	Very unlikely (<10%)	Worsened since baseline (>90%)
	Tas	32.7	17.8	Very unlikely (<10%)	Worsened since baseline (74%)
	Vic	89.9	49.0	Very unlikely (<10%)	Worsened since baseline (>90%)
	WA	64.2	35.0	Very unlikely (<10%)	Worsened since baseline (49%)
Target 15A	ACT	0.0	15.6	Very unlikely (<10%)	No noticeable change since baseline (>90%)
	NSW	0.8	16.3	Very unlikely (<10%)	No noticeable change since baseline (>90%)
	NT	70.0	74.7	Very likely (>90%)	Improved since baseline (>90%)
	Qld	30.6	41.5	Very likely (>90%)	Improved since baseline (>90%)
	SA	76.6	80.2	Very unlikely (<10%)	Improved since baseline (>90%)
	Tas	0.9	16.4	Very unlikely (<10%)	No noticeable change since baseline (>90%)
	Vic	6.6	21.1	Very unlikely (<10%)	Improved since baseline (>90%)
	WA	65.6	71.0	Very likely (>90%)	Improved since baseline (>90%)
Target 15B	NSW	0.2	4.4	Very unlikely (<10%)	No noticeable change since baseline (>90%)
	NT	4.5	8.5	Very unlikely (<10%)	No noticeable change since baseline (>90%)
	Qld	19.8	23.2	Very likely (>90%)	Improved since baseline (>90%)
	SA	0.6	4.8	Likely (86%)	Improved since baseline (>90%)
	Tas	0.0	4.2	Very unlikely (<10%)	No noticeable change since baseline (>90%)
	Vic	2.6	6.7	Very unlikely (<10%)	Improved since baseline (>90%)
	WA	34.2	37.0	Very unlikely (<10%)	Improved since baseline (>90%)

CONTACT US

Centre for Indigenous Policy Research
POLIS: The Centre for Social Policy Research
Research School of Social Sciences
ANU College of Arts & Social Sciences

Copland Building #24
The Australian National University
Canberra ACT 0200
Australia

T +61 2 6125 0587
W caepr.cass.anu.edu.au

ANU CRICOS Provider Number: 00120C