Review of the New Zealand crime and safety survey and other statistical information about the social impact of crime: 2016
Crown copyright ©

This work is licensed under the Creative Commons Attribution 4.0 International licence. You are free to copy, distribute, and adapt the work, as long as you attribute the work to Statistics NZ and abide by the other licence terms. Please note you may not use any departmental or governmental emblem, logo, or coat of arms in any way that infringes any provision of the Flags, Emblems, and Names Protection Act 1981. Use the wording 'Statistics New Zealand' in your attribution, not the Statistics NZ logo.

**Liability**

While all care and diligence has been used in processing, analysing, and extracting data and information in this publication, Statistics New Zealand gives no warranty it is error free and will not be liable for any loss or damage suffered by the use directly, or indirectly, of the information in this publication.

**Citation**


ISBN 978-0-908350-51-3 (online)

**Published in July 2016 by**

Statistics New Zealand

Tatauranga Aotearoa

Wellington, New Zealand

**Contact**

Statistics New Zealand Information Centre: info@stats.govt.nz

Phone toll-free 0508 525 525

Phone international +64 4 931 4600

[www.stats.govt.nz](http://www.stats.govt.nz)
Contents

List of tables and figures ............................................................................................................ 4

1 Purpose and summary ............................................................................................................. 5
   Purpose .................................................................................................................................. 5
   Key findings and recommendations ...................................................................................... 5
   Next steps ............................................................................................................................... 6

2 Introduction to crime statistics ............................................................................................. 7

3 Critical information needs for a social investment approach ............................................ 8
   The Integrated Data Infrastructure ....................................................................................... 8
   Information needs .................................................................................................................. 8
   NZCASS and the IDI ............................................................................................................. 9

4 Data source options ................................................................................................................ 11
   Police reports ....................................................................................................................... 11
   Court reports ....................................................................................................................... 11
   Corrections reports ............................................................................................................. 12
   New Zealand Crime and Safety Survey .............................................................................. 12
   General Social Survey ....................................................................................................... 13
   Hospital discharges ............................................................................................................ 13
   ACC claims ........................................................................................................................... 13
   Other sources ...................................................................................................................... 13

5 How the NZCASS could be better employed ................................................................. 15
   What the current NZCASS costs ......................................................................................... 15
   Options to improve NZCASS ............................................................................................. 16
   Summary assessment ........................................................................................................ 20

6 Conclusions .......................................................................................................................... 22
   Recommendations ............................................................................................................. 22

References and further reading ............................................................................................... 23
   References ........................................................................................................................... 23
   Further reading ................................................................................................................... 23

Appendix 1: Terms of reference ............................................................................................. 24
   Review of NZCASS and other information about the social impact of crime .................... 24

Appendix 2: Investment approach diagram ........................................................................... 27

Appendix 3: IDI content March 2016 .................................................................................... 28
List of tables and figures

List of tables

1 Purpose and summary ........................................................................................................5
  1. Agency responsibility for implementing recommendations, when approved ...........6
4 Data source options ........................................................................................................11
  2. Summary assessment for the IDI .................................................................................14
5 How the NZCASS could be better employed ..............................................................15
  3. Response rates of a selection of national crime victim surveys ..............................15
  4. Future focus options for the NZCASS ........................................................................19
  5. Summary of options to improve NZCASS ...............................................................20

List of figures

Appendix

1. Investment approach for the justice sector ...............................................................27
  2. Integrated data: Integrated Data Infrastructure content March 2016 ....................28
1 Purpose and summary

Purpose

Review of the NZ crime and safety survey and other statistical information about the social impact of crime: 2016 sets out the results of our review. Statistics NZ completed the review at the request of the Ministry of Justice.

This report makes four action recommendations which, if implemented, would help the justice sector develop an analytical framework to inform social investment.

The review

The review identified options for addressing critical statistical data needs for a social investment approach, taking account of the impact and outcomes of crime. The Ministry of Justice wishes to ensure that the right information is available in a timely and efficient way – to inform better decisions. The social investment approach, as it is being developed in New Zealand, employs data integrated from different sources that support the analysis of at-risk populations and the effectiveness of policy interventions.

Crime outcomes are revealed through the effect crime has on victims. Obtaining suitable information about crime victims is problematic. Victim surveys, such as the New Zealand Crime and Safety Survey (NZCASS), were developed to help address this issue. However, victim surveys are relatively costly and, with other pertinent data sources being available, it is appropriate to consider the role of the survey – to ensure it is adequately focused and delivers value for money.

A four-person review team from Statistics NZ interviewed stakeholders in the justice sector, including the Ministry of Justice, New Zealand Police, Department of Corrections, Superu, Ministry for Women, and a ministerial advisor. The team also reviewed: documentation relating to the social investment approach in New Zealand, the NZCASS, and overseas literature relating to best practice for producing crime victim statistics.

The review team acknowledges the cooperation and assistance of officials in the justice sector in discussing the issues and responding to requests for documentation.

See appendix 1 for the terms of reference for the review.

Key findings and recommendations

Critical statistical information for social investment should be included in the Integrated Data Infrastructure (IDI). This means the Ministry of Justice should consider their data needs in terms of what is already in the IDI and what could be added.

The IDI alters the rationale for survey data since most surveys, including NZCASS, were designed as stand-alone information frameworks. In an IDI context, a crime victim survey can be designed around what it adds to the IDI, to exploit the unique strengths and value of the survey data.

More information about victims can be gleaned from existing administrative sources. There is potential to improve and extend the information found in these sources at relatively low cost. This leverages the trend to capture and use more data in justice sector law enforcement and service provision.

The value that victim surveys brings is their ability: to count the prevalence of crime victimisation beyond that reported to the authorities; to provide more accurate estimates
of crime victimisation incidence; and to provide victim-centred perspectives of crime’s effect and harm.

The recommendations of this report are framed within this context.

**Recommendations**

1. Bring NZCASS data into the Statistics NZ Integrated Data Infrastructure (IDI). (see p9/10)

2. Match NZCASS and reported crime data in the IDI at individual victim level, and harmonise them for volume and types of offences. (see p10)

3. Bring more Police data into the IDI, particularly that relating to the experiences of crime victims. (see p11)

4. Note: while the cost of NZCASS is reasonable, there is also considerable potential to improve its efficiency. (see p15)

5. Explore options to redevelop NZCASS, to collect crime volume data annually, expand the crime type coverage, and improve the cost efficiency of data collection, data processing, and output data access systems. (see p21)

**Next steps**

Implementing the recommendations will require collaboration between justice sector agencies and Statistics NZ. Table 1 outlines how agencies might be involved, if and as recommendations are approved by those involved.

**Table 1**

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Lead agency</th>
<th>Other agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Justice</td>
<td>Statistics NZ</td>
</tr>
<tr>
<td>2</td>
<td>Statistics NZ</td>
<td>Justice, Police</td>
</tr>
<tr>
<td>3</td>
<td>Police</td>
<td>Statistics NZ</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>n/a</td>
</tr>
<tr>
<td>5</td>
<td>Justice</td>
<td>Statistics NZ, Police</td>
</tr>
</tbody>
</table>
2 Introduction to crime statistics

Crime statistics are essential to a functional criminal justice system, for developing and implementing evidence-based policy, and for holding agencies accountable for their work in crime reduction and executing policies.

In New Zealand, the majority of crime statistics are extracted from Police administrative data. Beginning in late 2014, New Zealand Police have introduced new datasets with more detail about victims and offenders. Doing this addresses recommendations made by Statistics NZ in their 2009 review of justice statistics (Statistics NZ, 2009) and aligns with the Government’s stated intent of openness and transparency. These new improved datasets are in line with how Australia reports its official statistics.

Though detailed, New Zealand’s crime statistics still feature many of the shortcomings seen in most police and court administrative statistics. These include the ‘dark figure’ of crime, the crimes that never come to police attention. Administrative records are also subject to bias resulting from operational policy and recording practices (Lynch, 2014).

Crime victim surveys were developed some 50 years ago to supplement administrative data in indicating the true level of crime. Surveys report more crimes than the Police record and are more focused on data quality than administrative sources (used primarily for operations). In countries where public trust and confidence in police-sourced statistics is low, victim surveys are seen as more objective, and may even be the preferred source of official data. Victim surveys also offer comparable data on victims and non-victims, which allows risk and harm profiles to be built to inform policy and prevention work.

New Zealand has a well-developed system of police-based crime statistics that compare favourably with those produced in other countries (Statistics NZ, 2014). As such, rather than having a prime validation role, victim surveys complement police data by alluding to the ‘dark figure’ of crime, and providing more information about victim experiences.
3 Critical information needs for a social investment approach

This chapter reviews the critical statistical information needs for measuring crime outcomes, using a social investment approach.

The social investment approach directs policy intervention to achieve enduring long-term outcomes that substantively reduce harm and costs, and enhance social well-being. The proposition is that effective early intervention facilitates better longer-term outcomes. Also, the cost of interventions can be assessed and valued for their longer-term benefits (return on investment).

To implement this approach, justice sector thinking envisages a work stream with four connected levels.

See appendix 2 for a diagram illustrating this thinking.

The work stream entails:

- developing a performance measure to track progress against the goal of reducing the future burden of crime on society
- employing this measure, together with other data, to construct population segments that are at high risk of being offenders or victims
- using the resulting information to help identify early interventions, and testing how effective interventions are against the outcome model.

Integrated Data Infrastructure

The New Zealand Government invested in the Integrated Data Infrastructure (IDI) at Statistics NZ to help with the social investment approach. The IDI links together administrative and survey data at the individual level. This data is about the circumstances and experiences of New Zealanders (e.g., their experience of crime) and their use of public services, including education, health, employment, and income support.

The IDI is person-centred. The structure provides a longitudinal view of individuals’ circumstances and experiences. This means it can take a life-time view of individuals, which enables analysis and monitoring of well-being and harm trajectories, supports identifying high-risk groups and the factors that confer risk, and helps assess the impact of interventions.

Information needs

A report commissioned by the Ministry of Justice and Treasury (Taylor Fry, 2015, p32) identified a critical set of data needed for a social investment information framework:

- all recorded crime by crime type, and tangible and intangible costs
- all justice sector agencies, including Child Youth and Family in its Youth Justice capacity
- offenders, including data related to youth offending
- victims, including relationship to offender and data related to childhood victimisation
- locations where crimes are committed.
This dataset comprises existing data (e.g., recorded crime by type) and data that needs to be derived analytically from existing data and modelling (e.g., cost of crime).

In discussions the review team had with stakeholders, nothing suggested this list was not adequate. In the main, stakeholders were concerned about how far the data might need to be elaborated, particularly the coverage and granularity of types of crime. The team therefore considers this list provides a practical basis for reviewing information needs.

Coverage and granularity of crime type data affect how to compile a harm measure and the subsequent segmentation process. Compiling a volume measure based on a simple aggregation of all crime incidence is referred to as ‘unweighted’ (i.e., each type of crime carries the same harm or seriousness rating).

Weighted measures employ auxiliary data about harm or seriousness to weight different crime types. An example is the Justice Sector Seriousness Score classification, which employs sentencing patterns to weight crimes (Justice Sector, 2013). Other options for weighting the data include victim and non-victim assessments obtained by crime victim and other surveys.

The Taylor Fry report recommended a system-outcome measure, based on “all costs associated with recorded crime” (2015, p44). The review team notes this approach would require a range of volume/incidence, cost, and harm data, and that some of this data is typically obtained from victim surveys.

The report also recommends that a more frequent (annual) victim survey would provide a more complete view of crime, and how reporting levels affect recorded crime rates.

Chapter 4 covers the relative merits of NZCASS as a data source for social investment. However, we now discuss the role that victim survey data may play in formulating the critical data elements.

**NZCASS and the IDI**

Data on the total volume and incidence of crime is central to compiling an outcome measure of harm for a social investment approach in the justice sector. So too, is data about the harm of crime. Reported crime provides an initial and very useful picture, but is not itself adequate because a significant portion of crime does not appear in the system. Not only do the reported statistics understate the volume of crime, but the extent to which different types of crime are understated varies – by type and over time as operational priorities change. In addition, the characteristics of the victims and perpetrators of unreported crime differ from those associated with reported crime (Ministry of Justice, 2015, p108).

These two issues have a significant bearing on formulating a crime outcome measure for a social investment approach. This is because both the measured volume and the distributional characteristics of the crime affect the results of the segmentation process, and the calculation of costs and/or harm.

The review team considers that both police and survey victim data sources should be used together, rather than selecting one or the other. In the past this would have been difficult. However, the IDI provides a platform on which the two sources could be harmonised, to exploit the granular nature of the data and utilise the relative strengths of both sources. The Ministry of Justice has undertaken preliminary work to assess how this might be implemented (Ministry of Justice, 2015a).
Recommendations

Recommendation 1: Bring NZCASS data into the IDI.

Recommendation 2: Match NZCASS data and reported crime data in the IDI at individual victim level, and harmonise them for offences and types of offences.

Carrying out these recommendations will have two major benefits. Firstly, validating/verifying administrative data against survey responses supports more robust estimation of total crime and its distribution over a number of characteristics (e.g., crime type, victims, offenders, and location), to a degree that could not be achieved by using the sources separately.

Secondly, it provides better understanding of the data collected in the victim survey and assists in designing more efficient and robust ways of collecting that data. In particular, where survey data can be matched with administrative data at the victim/offence level, we gain information about the efficiency of the survey questions.

Some overseas studies using this type of matching reveal significant ‘telescoping’ bias in victim surveys, which occurs when respondents report incidents that occurred outside the survey’s reference period. Telescoping is likely to inflate the apparent discrepancy between crimes reported to the Police and those reported in the victim survey (Elffers, 2013). This type of information is crucial to help design more robust victim surveys and for understanding, and possibly adjusting, the discrepancy.

However, victim surveys complement Police reports and other administrative data. Integrating the data sources will yield more information, but not replace the unique contribution the crime victim survey provides. While a significant proportion of crime goes unreported to the Police, victim surveys are needed to fill a major gap.

We discuss options for improving the collection of crime victim data in chapter 5.
4 Data source options

This chapter reviews a range of existing and potential data sources that might help address the information needs outlined in chapter 3. We consider the data sources for the marginal value they would contribute to other data in the IDI.

See the end of this chapter for a summary assessment.

We consider seven data sources:

- Police reports
- Courts reports
- Corrections reports
- New Zealand Crime and Safety Survey (NZCASS)
- General Social Survey (GSS)
- Hospital discharges
- Accident Compensation Corporation (ACC) claims.

Police reports

Published New Zealand Police statistics are detailed, and include information on the relationship of the victim to the offender and the location of the event.

The strengths of police data are that they provide a granular view of a range of offence types and of their geographic location. They also provide much improved views, from the perspective of victims and offenders, where the offence is reported to the Police.

A critical weakness of police data is that they understate the real level of crime. The NZCASS estimates that two-thirds of crime is not reported to the Police (Ministry of Justice, 2015, p105). The review team notes that a more robust measure of under-reporting would be obtained from analysing matched police and NZCASS data within the IDI.

There is possibly a range of additional information relating to crime victimisation held by the Police that has not yet been included in the IDI, such as information about the involvement of weapons, alcohol, or drugs, a family violence indicator, and possibly free-text information about victim experience. The review team believes the benefits of gaining the extra information would be valuable.

Recommendation

Recommendation 3: Bring more Police data into the IDI, particularly that relating to the experiences of crime victims.

Police reports address all the critical data needs identified in chapter 4 for an information framework for the social investment approach.

Court reports

The Ministry of Justice publishes information on the number of adult offenders who attended court, and on the number of children and young people who were prosecuted or given orders in court. The IDI also holds information on individuals charged in New Zealand courts, much of which is additional to the published tables.
Court reports address the need for data from all justice sector agencies as identified in the previous chapter (see ‘Information needs’ section).

Before an offender is sentenced, a victim impact statement may be prepared for the judicial officer sentencing the offender, so they understand how the offence has affected the victim. Victims are encouraged, but not required, to provide a statement – so information in these statements represents a subset of the victim population (ie those who furnish a report).

The data is held in free text form, but scanning and parsing technology should be able to extract data suitable for statistical use.

However, before considering the technical feasibility further, more thought needs to be given to the potential value of the information and how appropriate these documents are as a data source for statistical information.

**Corrections reports**

The Department of Corrections publishes data on remand and sentenced prisoners, which include information on offence type, duration of stay, and demographic information. Corrections data is in the IDI, and includes information on location, and start and end dates of remands and sentences. The Department of Corrections’ two-yearly Offender Population Report provides similar data. The report analyses offender volume patterns by age, sex, ethnicity, offence group, and sentence type, and how these change over time.

Corrections data addresses the need for data from all justice sector agencies and data on offenders, as identified in chapter 4. Corrections also holds additional data that could further address these needs.

**New Zealand Crime and Safety Survey**

The NZCASS is a face-to-face household survey with a sample of about 7,000 New Zealand residents aged 15 years or over. The 2014 survey was the third; previous surveys were in 2006 and 2009.

The NZCASS collects information about New Zealanders’ feelings of safety and their experiences of crime. The survey aims to:

- provide information about the extent and nature of crime and victimisation in New Zealand
- measure how much crime gets reported to Police
- understand who experiences crime and how they react
- identify the groups who are more at risk of being a victim
- understand the experiences and needs of victims
- measure crime trends in New Zealand.

The main strength of a crime victim survey is its ability to supplement police data to provide a more coherent picture of crime levels. Surveys also provide a nuanced perspective of seriousness of crime and valuable information about the harm crime does, from a victim perspective.

The main weakness of a crime survey is that the granularity of the offence type and location data they provide is severely limited – the sample size required to provide this detail is prohibitively expensive.

NZCASS in its current form addresses a number of the needs for information about victims discussed in chapter 4, especially the need for greater contextual information.
Improvements that could be made to the survey, including incorporating NZCASS in the IDI, would help further address these needs.

General Social Survey

The New Zealand General Social Survey (GSS) is run every two years by Statistics NZ. It has a sample of 8,000 people, to provide information on the well-being of New Zealanders aged 15 years and over. It covers a wide range of social and economic outcomes and shows how people are faring. In particular, the GSS provides a view of how well-being outcomes are distributed across different groups within New Zealand’s population.

The GSS asks questions about crime in New Zealand – specifically about how safe the respondent feels in various situations, if they’ve had any crimes committed against them in the last 12 months, and questions about the respondent’s social connections.

The GSS could be used to construct samples of victims of crime, to collect enough information to link those who have reported the crimes with police data, and to classify the type of crime for those who have not reported the crime.

Comparing the GSS with the NZCASS shows the prevalence rate of non-violent crime measured by the GSS is about half that measured in NZCASS; and for violent crime it’s about one-quarter (Statistics NZ, 2010, p20). Some of the factors causing these differences could be ameliorated if the GSS questions were refined and data could be compared in the IDI.

The GSS addresses the need for contextual information about victims and their experiences and demonstrates the potential to collect victim data in other surveys.

Hospital discharges

Ministry of Health hospital discharge data includes clinical codes that use the International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10). ICD-10 contains classifications for external causes of morbidity and mortality, and more specifically classifications of injuries caused by assault. ICD-10 also classifies neglect and abandonment, and other maltreatment, by its source (neglect and abandonment by parent). The IDI also has comprehensive discharge data.

If linked to other justice sector data, hospital discharge information may be useful to supplement information on victim experiences, and subsequent health outcomes.

ACC claims

The Accident Compensation Corporation (ACC) provides comprehensive, no-fault personal injury cover for all New Zealand residents and visitors to New Zealand. All ACC claims data are within the IDI. If linked to justice sector data, ACC claims may provide information of the cost of injuries sustained through victimisation, which helps to address the need for information on victim experiences.

Other sources

The National Health Survey (NHS) run by the Ministry of Health asks questions about psychological distress and hazardous drinking. This information could supplement existing data sources if it can be linked within the IDI.

The NHS and the Household Labour Force Survey could be used like the GSS. This option is explored in more detail in chapter 5.
### Table 2
Summary assessment for the IDI

<table>
<thead>
<tr>
<th>Data source</th>
<th>Victim prevalence</th>
<th>Victim incidence information</th>
<th>Offence type, granularity, and coverage</th>
<th>Harm</th>
<th>Geographic granularity</th>
<th>Overall rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police offenders</td>
<td>…</td>
<td>…</td>
<td>Comprehensive</td>
<td>Medium</td>
<td>Very good</td>
<td>Medium</td>
</tr>
<tr>
<td>Police victims</td>
<td>Poor</td>
<td>Good</td>
<td>Selective</td>
<td>Medium</td>
<td>Very good</td>
<td>High</td>
</tr>
<tr>
<td>Courts</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>Medium</td>
<td>Very good</td>
<td>Medium</td>
</tr>
<tr>
<td>Corrections</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>Medium</td>
<td>Very good</td>
<td>Medium</td>
</tr>
<tr>
<td>NZCASS</td>
<td>Very good</td>
<td>Very good</td>
<td>Selective</td>
<td>High</td>
<td>Poor</td>
<td>High</td>
</tr>
<tr>
<td>NZGSS</td>
<td>OK</td>
<td>Poor</td>
<td>Selective</td>
<td>Low</td>
<td>Poor</td>
<td>Medium</td>
</tr>
<tr>
<td>Hospital</td>
<td>Selective</td>
<td>Good</td>
<td>Selective</td>
<td>Medium</td>
<td>Limited</td>
<td>Low</td>
</tr>
<tr>
<td>ACC</td>
<td>Poor</td>
<td>Good</td>
<td>Poor</td>
<td>Low</td>
<td>Very good</td>
<td>Low</td>
</tr>
</tbody>
</table>

Symbol: … not applicable
Source: Statistics New Zealand
5 How the NZCASS could be better employed

This chapter considers how the NZCASS could be better employed for social investment information needs.

The review team considered recent reviews of the NZCASS that the justice sector undertook, sought views from stakeholders in the justice sector, reviewed international best practice, and sought views from national statistical agencies that are actively involved in crime victim surveys.

Other countries also have concerns about improving the efficiency and effectiveness of national crime victim surveys. Common issues are: improving the efficiency of sample designs, low response rates, developing more cost-effective data collection modes, and extending the detail of analysis (eg small domain modelling). New Zealand’s survey achieves a considerably better response rate than most others, but it also employs a relatively smaller sample, which limits the analytical detail that can be done.

Table 3
Response rates of a selection of national crime victim surveys

<table>
<thead>
<tr>
<th>Country</th>
<th>Response rate (%)</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>73</td>
<td>2015</td>
</tr>
<tr>
<td>Canada</td>
<td>53</td>
<td>2014</td>
</tr>
<tr>
<td>New Zealand</td>
<td>81</td>
<td>2015</td>
</tr>
<tr>
<td>UK (England &amp; Wales)</td>
<td>70</td>
<td>2015</td>
</tr>
<tr>
<td>USA</td>
<td>87</td>
<td>2014</td>
</tr>
</tbody>
</table>

What the current NZCASS costs

The relative cost of running a crime victim survey has been questioned by many countries. In some, the cost concern has also been driven by concerns about the data quality as response rates decline. Since New Zealand has not experienced the same response decline across household surveys, the cost-quality quotient is less of a concern. However, an investment of $2 million over a three-year cycle is substantial, and rightfully attracts scrutiny.

The cost of NZCASS is within the range of other household surveys conducted by government agencies. Taking into account the nature and complexity of NZCASS, the review team considers the cost is not unreasonable.

However, there is considerable potential to improve the efficiency of the current survey, whether in its current form or a form that views survey data in the broader context of victim-related data in the IDI.

Recommendation

The review team notes that while the cost of the NZCASS is not unreasonable, there is considerable potential to improve its efficiency.
Options to improve NZCASS

The review team has identified three options:

1. Status quo
2. Redevelop the NZCASS
3. Parcel out NZCASS functions to other surveys.

Options 2 and 3 require further investigation to determine the value they would deliver and the investment they require. One purpose of this review was to identify options worth considering.

While options 2 and 3 offer benefits for improved data quality and efficiency, they would also disrupt comparability of survey results with those of previous surveys. This is an inevitable outcome of design and methodological improvements to information systems of this type. However, the disruption can be managed rather than being a reason to not make the improvements. A critical element of effective management is ongoing consultation and communication with key stakeholders, to ensure they understand and support the trade-off and are prepared to deal with the disruption.

**Option 1: Status quo**

Option 1 would mean NZCASS remained in its current form and frequency (although this has been irregular over recent years). Some marginal improvements could be made to improve value for money.

For example, relatively low-cost improvements could be made to the imputation methodology. This avoids the need for specific knowledge or skills to carry out this part of the process (although uncertainty surrounding the imputation means we can’t know the extent of the change until it’s looked at closely). Other elements of the survey could be independently refined, but this moves towards redevelopment in terms of cost and scope.

The review team considers the cost of the current survey programme is reasonable in the light of contemporary household surveying costs. However, in its current form, the survey could deliver more value for money, although a significant capital reinvestment would be required to pursue other options listed below.

Some features of the current arrangements, if not addressed, could undermine the sustainability of the survey. For example, the imputation process.

**Option 2: Redevelop NZCASS**

Redeveloping NZCASS retains the key objectives and themes of the current survey, but would involve redeveloping: the sample design, survey methodology, survey instrument, data capture and processing systems, and the output production process.

The objective would be to streamline processes – to ensure operational sustainability and data quality, minimise operational risk, and substantially improve value for money.

Streamlining could be carried out by using ‘packages’ with different mixes of the five elements listed above. There are many possible packages and more work is required to identify the most promising. We examine the five elements in more detail below.

Recent reviews of the survey undertaken by the Ministry of Justice identified issues and analysed them in detail (Ministry of Justice, 2010, 2014a, 2014b).

The review team considers these reports contain useful and well-considered ideas.

**Sample design**

Obtaining a sufficient sample of victims is a major cost factor for NZCASS and therefore the current design is not efficient. This is primarily a result of the frame employed (general households), although we gain some efficiency by using a dual frame to target Māori (ie
using more than one data source to select the sample). The design should be reviewed to consider other options, such as stratification. Another dual-frame option would use police victim data as a survey frame, complemented by a conventional area-based household frame to address the bias in the police frame and to cover non-victims.

Statistics NZ is investigating the feasibility of building a household list frame, which could offer more options to achieve selection efficiency.

**Survey methodology**

Current practice for NZCASS favours an interviewer administered, face-to-face collection mode. Other countries employ more cost-efficient methods, including telephone administered and electronic self-completion. However, these are known to affect data quality. Considering the cost-benefit of applying different methods would be useful.

**Survey instrument**

The current instrument was assessed by NZCASS practitioners (those who manage the survey-commissioning process and undertake the initial data analysis) as unwieldy and outdated. Redevelopment might deliver a more efficient interview and better quality data. There is also a need to develop a more efficient victim-filter module for use in other surveys.

**Data capture and processing systems**

NZCASS practitioners assessed the current systems as being outdated and unwieldy, so they now pose a considerable operational risk around timely delivery and data quality. The systems evolved from being a research tool; they need to be updated and integrated into the process to assure sustainability. The complex imputation process we bolted on needs to be more transparent and integrated.

**Output production**

The survey results don’t reach customers quickly enough. The process to report on the results of the survey needs to be redeveloped to allow outputs to be delivered more efficiently.

**Redevelopment considerations**

The extent or focus for redeveloping both the questionnaire and sample design would need to be investigated through the social investment approach (within the justice sector but also for the whole of the government sector), and weighed up against other objectives. It would also involve investigating alternative data sources to replace survey questions.

For example, the Ministry might place more emphasis on measuring the volume and harm of crime for selected offence types. If offence types that shared common victim populations were allocated to separate surveys, the sample design of those surveys could be tailored, delivering more efficiency.

We recommend focusing on gaining greater efficiency through sample design, with an emphasis on targeting the victim population. This is because in a survey of this nature, sample design is a major cost element that can be improved. It is not clear how much efficiency might be gained by this approach without having better ways to identify actual or potential victims. However, identification of victims may be assisted by initiatives underway in Statistics NZ to develop a population/social survey address frame.

The review team notes that stakeholders have a strong view that survey frequency needs to be increased from being approximately five-yearly to being one- or two-yearly. The additional cost of doing this would be partly offset by using more efficient methodology and processes. Capability would be more easily maintained with a more frequent survey, ensuring more comparable and higher quality data. A continuous survey also means that data could be combined over different periods to increase the sample size.
Modules and/or targeting could be used periodically to obtain more accurate data on specific crime types. A rotating panel design would increase the capability for longitudinal analysis and improve estimates of change. This design also adds the option of introducing alternative modes of data collection for subsequent interviews, at least for non-victims.

Also, integration into the IDI may make it possible to reduce the complexity of the survey in the future, if the detail of offence type coding can be simplified as a result of linking successive waves of the survey.

Table 4 presents possible focus options for the survey in the future (for a social investment approach). It shows the implications of each option on the questionnaire design, and mode options and sample design considerations.
### Table 4
Future focus options for the NZCASS

<table>
<thead>
<tr>
<th>Focus options</th>
<th>Implications for questionnaire</th>
<th>Mode</th>
<th>Sample design</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Selection of higher harm(^{(1)}) or less prevalent crime types.</td>
<td>Longer(^{(2)}) \nMay require more than one, or different modules depending on the type of crime.</td>
<td>Possibility to introduce different modes (CATI, online) if the same respondents are followed up.</td>
<td>Improved targeting. Possibility to use separate surveys for different crime types. Possibility to use repeated interviewing (longitudinal, or rotating panel design).</td>
</tr>
<tr>
<td>2. Comprehensive coverage of crime types.</td>
<td>Shorter(^{(1)}) \nFocus on volume of crime (for harm measure). Also collect information to construct harm measure (weights)</td>
<td>Face-to-face</td>
<td>Cross-sectional design but a continuous survey, so the possibility is added to combine over years to increase the sample size.</td>
</tr>
<tr>
<td>3. Comprehensive coverage, but periodic modules added to capture less prevalent/higher harm(^{(1)}) crime types in more depth.</td>
<td>Shorter but with added modules.</td>
<td>Face-to-face for main survey with possibility of different modes for follow-up interviews.</td>
<td>Continuous survey with possibility of longitudinal element to modules. Improved targeting when run modules (but without losing too much efficiency for capturing as many types of crime as possible).</td>
</tr>
</tbody>
</table>

1. As may be defined in the social investment approach.

2. Option 1 may have a longer questionnaire due to asking more questions and details about each offence, and the impact of each incident on the victim. Option 2 may to shorter as only asking if they have experienced a crime, but not collecting detailed information on each incident (except information to construct weights for a weighted harm measure).
Option 3: Parcel out NZCASS functions to other surveys

Moving NZCASS functions to other surveys entails stopping NZCASS in its current form. This might require reassigning some NZCASS funding to support adding these functions in the other surveys.

The proposition driving this option is that, with IDI and the growing range of other data about victims and crime harm, there is less need for a comprehensive stand-alone survey.

A critically important function of a crime victim survey is to supplement information about the levels and patterns of crime victimisation obtained from existing administrative sources – such as Police reports. Other existing surveys could be employed to identify samples of crime victims to include in the IDI and construct a statistical frame of crime victims. This frame could be linked with other crime victim data, such as police data and other data relevant to understanding the volume of crime and its outcomes.

This option could be done at marginal cost. It would utilise surveys such as the GSS, HLFS, and NZ National Health Survey, to generate samples of victims whose experiences and circumstances could be investigated further when linked to IDI data.

Summary assessment

Table 5
Summary of options to improve NZCASS

<table>
<thead>
<tr>
<th>Option</th>
<th>Advantages</th>
<th>Disadvantages/Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status quo</td>
<td>No change to cost</td>
<td>Any adjustments would have limited impact on the survey’s usefulness.</td>
</tr>
<tr>
<td></td>
<td>Small adjustments could be made to create better value for money – might require minor initial investment</td>
<td>Survey continues to have low value for money; less relevant to current information needs.</td>
</tr>
<tr>
<td></td>
<td>Maintains consistency.</td>
<td></td>
</tr>
<tr>
<td>Redvelop the NZCASS</td>
<td>Better value for money.</td>
<td>Significant initial cost and time investment.</td>
</tr>
<tr>
<td></td>
<td>More sustainable; better management of changing operational risks.</td>
<td>Significant time-series disruption – affects organisations that use NZCASS figures as a baseline measurement.</td>
</tr>
<tr>
<td></td>
<td>Maintains some continuity of themes.</td>
<td></td>
</tr>
<tr>
<td>Parcel out NZCASS functions to other surveys</td>
<td>More statistical precision (from larger sample size) for measuring crime volume.</td>
<td>Significant time-series disruption – affects organisations that use NZCASS figures as a baseline measurement.</td>
</tr>
<tr>
<td></td>
<td>Medium- to long-term cost savings.</td>
<td>Significant initial investment cost (but operating costs should be lower than for a dedicated survey).</td>
</tr>
<tr>
<td></td>
<td>Estimated number of victims in the population likely to be lower than from a dedicated crime victim survey.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risk of lower quality/ coverage of responses— initial NZCASS questions help build rapport between interviewer and respondent.</td>
<td></td>
</tr>
</tbody>
</table>
Conclusion
The review team considers that, in the short term, option 2 (to redevelop the survey) be implemented. In the medium term, the third option (to parcel out functions to other surveys) should be investigated further.

We prefer the redevelop option because the feasibility of option 3 depends on first demonstrating its value (e.g., more efficient survey instrument).

Recommendation
Recommendation 5: Explore options to redevelop NZCASS, to collect crime volume data annually, expand the crime type coverage, and improve the cost efficiency of data collection, data processing, and output data access systems.
6 Conclusions

This report proposes that critical statistical information for social investment should be located in the IDI. Data needs should be considered alongside what is already in the IDI and what value could be gained from including a survey of crime victims.

The IDI alters the place of survey data since most surveys, including NZCASS, were designed as stand-alone information frameworks. A crime victim survey can be designed around what it adds to the IDI, to exploit the unique strengths and value of survey data.

We can glean more information about victims from existing administrative sources. We could also improve and extend the information at relatively low cost, leveraging the trend to capture and use more data in justice sector law enforcement and service provision.

The value that victim surveys bring is their ability: to count the prevalence of crime victimisation beyond that reported to the authorities; to provide more accurate estimates of crime victimisation incidence; and to provide victim-centred perspectives of crime’s effect and harm. A survey complements administrative data.

The recommendations of this report are framed within this context.

Recommendations

The review team recommends:

1. Bring NZCASS data into the Statistics NZ Integrated Data Infrastructure (IDI).

2. Match NZCASS and reported crime data in the IDI at individual victim level, and harmonise them for volume and types of offences.

3. Bring more Police data into the IDI, particularly that relating to the experiences of crime victims.

4. Note that while the cost of NZCASS is not unreasonable, there is considerable potential to improve its efficiency.

5. Explore options to redevelop the NZCASS, to collect crime volume data annually, expand the crime type coverage, and improve the cost efficiency of data collection, data processing, and output data access systems.
References and further reading

References


Further reading


Appendix 1: Terms of reference

Review of NZCASS and other information about the social impact of crime
28 January 2016

Background

Reviews of subject matter statistics are undertaken by the Government Statistician from time to time to ensure that the right information is being produced (relevance), that the statistics are fit for use (quality), and that the statistical infrastructure investment is appropriate (value for money).

Government has a strong commitment to improve the social outcomes of New Zealanders through more effective social investment. Among other things, this requires the production of better information about social outcomes and the impact that individual life course events and choices have on outcomes.

An important area of interest is the impact of crime on the social outcomes of both victims and their families, and the families of the offenders.

Crime statistics are generally based on Police reports. However, ambient crime levels for some offences are higher than what is apparent in the Police data, because of the propensity to report those offences. Furthermore, administrative data sources, like Police reports, are not normally a sufficient source of information about the social impact of crime, which is needed to inform a range of public policy and social investment issues.

Surveys of victims of crime have been developed internationally to supplement Police data and address these and other information needs. In New Zealand, the NZ Crime and Safety Survey (NZCASS) is undertaken by the Ministry of Justice (MoJ), producing information about the incidence and impact of crime from the perspective of victims. Five surveys have been undertaken over the past 20 years, at roughly five yearly intervals.

The MoJ funds the survey programme, managing the design and doing much of the analysis in-house, and contracting data collection, processing and some analysis to a range of private sector companies.

The scope, objectives and uses of the survey have evolved over the past 20 years. In that time there have been changes in crime patterns and trends and in information needs. The survey has met some of the information needs for which it was originally designed, other needs have emerged, and some needs require periodic monitoring.

Problem statement

Whilst acknowledging that the NZCASS in its current form meets many of its objectives, MoJ is aware that it does not fully meet some other important information needs. In particular, crime monitoring and trend analysis are underdeveloped in the current programme. The MoJ wishes to ensure that they have the right information available in a timely way to inform better decisions in a social investment approach.

Scope

- Identification and prioritisation of information needs in the context of the social investment approach
- Consideration of how survey data in conjunction with administrative data could be better used to address the needs identified above
• Consideration of how the NZCASS (or an alternative survey) might be better deployed to serve this objective, including but not confined to, improving the frequency and scope of statistical monitoring of ambient crime levels, patterns and trends.

Scope exclusions
• Comprehensive elaboration of design and costing of statistical programme options.
• Evaluation of the technical quality of the current NZCASS.
• Consideration of the broader range of data and analytical needs required to inform the statistical modelling associated with social investment policy development.

Membership
The review will be conducted by a small team from Statistics NZ, comprising:
• Principal Statistician – Paul Brown (team leader)
• Manager Justice, Injury and Indicators – Natalie Keyes
• Methodologist – Julia Hall
• Statistical Analyst – Jarrod Williams

The key MoJ contacts for the Statistics NZ team to liaise with in order to conduct the review are:
• Manager Research & Evaluation Sector Group - Andrew Butcher
• Principal Adviser - Michael Slyuzberg

The team will engage with Justice Sector managers and staff responsible for the collection and use of crime victim statistics, and be given appropriate access to relevant documentation. Among other things, previous reviews of NZCASS and international good practice will be considered.

Compliance burden will be minimised at both ends. It is envisaged that the review should not take up more than five to ten person-days of Justice sector resource.

Responsibilities
The Statistics NZ team will:
• Review relevant documentation and interview key Justice sector personnel relating to information needs of a social investment approach and the design and production of crime and victimisation statistics.
• Work with MoJ to determine and describe the key statistical information needs required from a victims’ survey.
• Make recommendations about any investment options or remedial actions that may be needed to meet the review objectives.
• Keep MoJ informed about the progress of the review.

Justice sector managers will:
• Provide all existing relevant documentation to the review team.
• Provide free and frank advice on matters pertaining to the review.
• Assist in identifying and establishing engagement with key information stakeholders.

Governance
Inter-agency governance will be overseen by Teresa Dickinson, Deputy Government Statistician (Statistics NZ) and Colin Lynch, Deputy CE Justice Sector (Justice).
Deliverables
A concise draft report completed by 15 March 2016
A final concise report completed, if required, by the end of 30 April 2016.
MoJ and Statistics NZ will jointly work on a communications strategy to support publication of report(s) arising from this review.
Figure 1: Investment approach for the justice sector

Appendix 2: Investment approach diagram
Appendix 3: IDI content March 2016

Figure 2

Integrated Data:
Integrated Data Infrastructure content March 2016

Education
- Daily Childhood Education Providers
- Primary Education — From 2007
- Secondary Education — From 2004
- Tertiary Education — From 1994

Benefits and services
- Benefit Dynamics Data — From 1990
- Child benefit, and 2nd and 3rd tax baseline payments — From 1994
- Youth Services — From 2005

Personal tax
- SME — From 1999
- IHT — From 1997
- IRD and IRRS — From 1995

Student Loans and Allowances
- From 1992

Student loans & allowances

Migration & movements
- Border movements — From 1997
- Visa applications — From 1997
- Departure and Arrival cards — From 1997
- Longitudinal immigration survey of NZ — 2006-2009
- Migrant survey — From 2012

Health and safety
- Population Health Demographics — From 2004
- NZH and HHI Addresses — From 2004 and 2005, respectively
- PAC Indicators — From 2003
- Chronic conditions — Compared from 2007
- Cancer registrations — From 1990
- Mortality — From 1990
- Pharmacovigilance — From 1995
- Publicly Funded Hospital Discharges — From 1990
- NVAP — National Non-admitted Patient Collection — From 2007
- Life and CMS claims — From 2000 and 2002, respectively
- NRE — From 2006
- Replacement check — From 2011
- (SM) — From 2008

Business Centred Business tax
- IIT — From 1999
- VAT — From 1999
- GST — From 1991
- CUSTOMS — (Foreign trade) — From 1996
- Government Assistance Programmes — From 1999
- Longitudinal Business Frame — From 1999
- Statistics NZ Business Surveys — From 1994

Families and households
- births, deaths, Civil Unions and Marriages — From 1946
- waiting for families — From 2009
- Child youth and family — From 1991
- Tenancy — From 2000
- Household Labour Force and NZ Income Surveys — From 2006
- Survey of Family Income and Employment — 2002-2010
- Social Housing Data — From 1984

Census
- 2015 Census

ACC
- Gains and medical codes 1994-2015

Statistics NZ operates a ‘five colour’ framework ensuring safe people, safe projects, settings, data and data outputs. Read more about their journey in managed on our website.

www.stats.govt.nz/kii