

RMCG

MAY 2025

Insights into cross-tenure weed data collection and sharing

Final Report

Victorian Serrated Tussock Working Group, Victorian Gorse
Taskforce, Victorian Blackberry Taskforce

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ACKNOWLEDGEMENT OF COUNTRY

We acknowledge the Traditional Owners of the Country that we work on throughout Australia and recognise their continuing connection to land, waters and culture. We pay our respects to their Elders past and present, and we acknowledge emerging leaders. Moreover, we express gratitude for the knowledge and insight that Traditional Owners and other Aboriginal and Torres Strait Islander people contribute to our shared work in Australia.

We pay respects to all Aboriginal and Torres Strait Islander communities. We recognise that Australia was founded on the genocide and dispossession of First Nations people and acknowledge that sovereignty was not ceded in this country. We embrace the spirit of reconciliation, working towards self-determination, equity of outcomes, and an equal voice for Australia's First People.

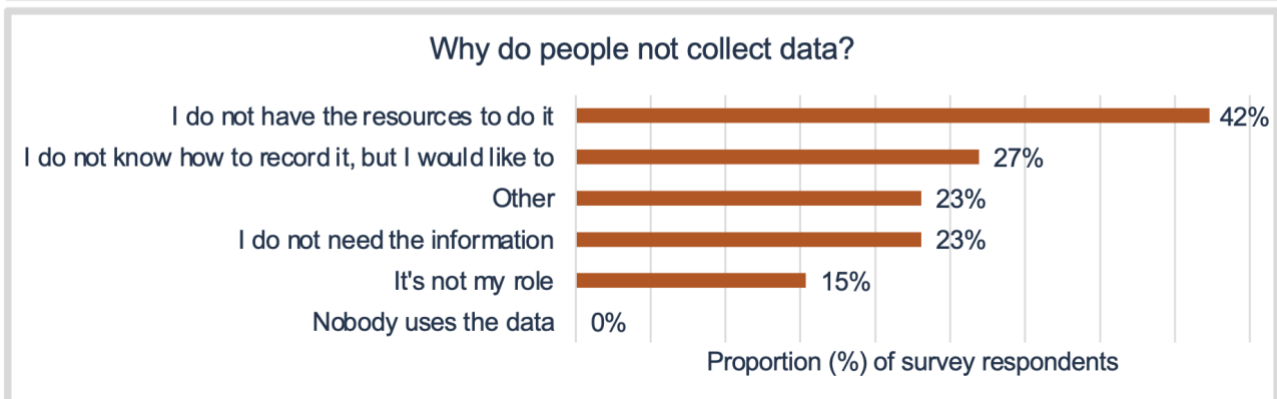
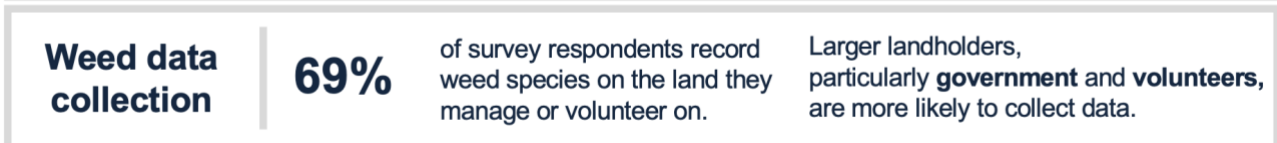
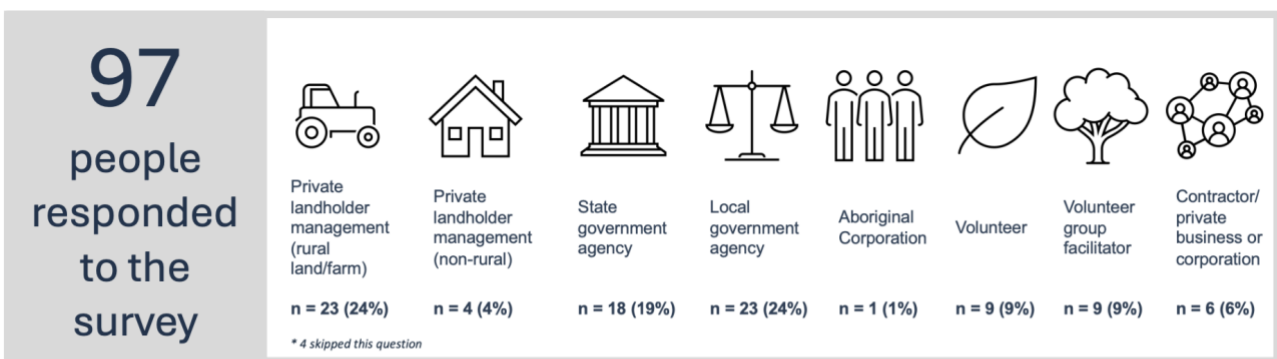
Executive Summary

OVERVIEW OF THE PROJECT

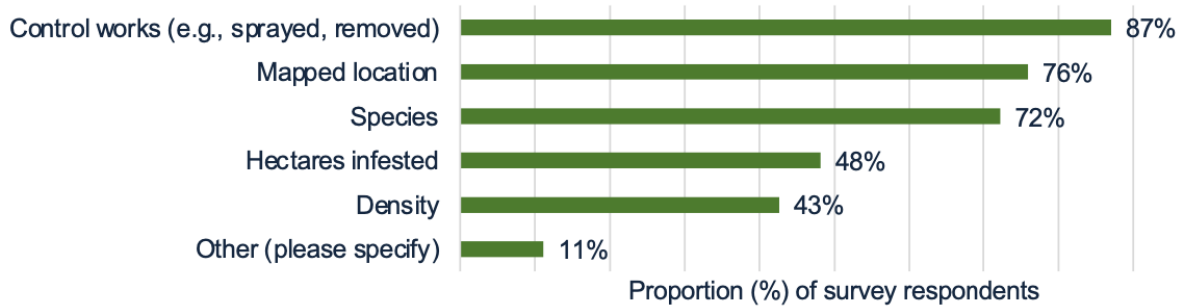
RM Consulting Group (RMCG) was engaged by three Community Pest Management Groups (CPMGs), the Victorian Serrated Tussock Working Group (VSTWG), Victorian Gorse Taskforce (VGT) and the Victorian Blackberry Taskforce (VBT), to explore opportunities and challenges in recording and sharing invasive plant species data across Victoria. The project combined a statewide online survey with two regional forums to identify barriers, enablers and recommendations for improved cross-tenure data sharing and collaboration.

A snapshot of the survey results and our key findings and recommendations are provided below.

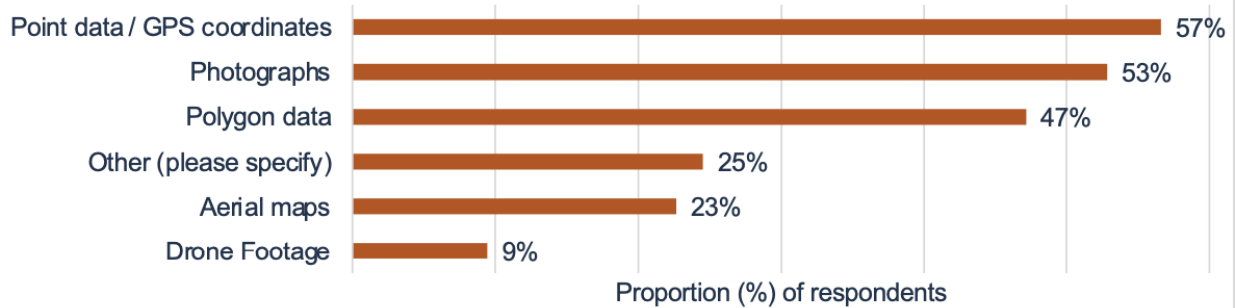
SURVEY RESULTS SNAPSHOT



Type of data collected (fields and attributes)



Commonly used data formats



Methods of data collection

- **Digital methods** for data collection were the most commonly used (mobile applications)
- **GPS devices and pen and paper methods** were also commonly used by respondents (42%)
- A small number of respondents utilise **website-based systems** (4%)

Commonly used applications:

- iNaturalist (24%)
- ArcGIS Field Maps and unspecified mobile use (incl. GPS tracking, waypoints and photographs) (22%)
- Survey123 and Avenza (14%)
- Weed scan (3%)
- There are others...

73% identified that they had shared the information and data they have collected with other stakeholders in the past

Main reasons for sharing:

- Coordination of efforts between landholders
- To meet funding and grant requirements
- Monitoring and targeting control of invasive species
- Supporting landowners in identifying species
- Reporting to stakeholders

Reasons not for sharing:

- No one has ever asked for the data
- There has never been a need
- Privacy concerns

CONCLUSIONS AND RECOMMENDATIONS

The challenges surrounding data collection, storage and sharing is complex, and it is not within the remit of the Community Pest Management Groups to address all the challenges. However there are some areas where the CPMGs could influence better data collection and sharing as we have outlined below in the recommendations.

CONCLUSION	RECOMMENDATION
<p>There appears to be limited awareness of successful collaborative weed mapping projects, which may be contributing to missed opportunities for learning, coordination, and the adoption of effective practices.</p> <p>Forum discussions also highlighted the importance of contributing to the Victorian Biodiversity Atlas (VBA), noting that it contains verified data and informs the Strategic Management Prospects tool, which guides state government investment in high-value environmental projects. As a result, participants supported the use of applications that feed into the VBA to ensure local data can inform broader strategic planning and funding decisions.</p>	<p>Recommendation 1: Promote best practice in weed data collection, collaboration, and sharing by:</p> <ul style="list-style-type: none"> ▪ Promoting successful collaborative weed mapping projects through case studies, presentations at events and / or social media to raise awareness of what effective collaboration can achieve and to highlight opportunities for improvement. ▪ Encouraging the use of data collection tools such as WeedScan and iNaturalist that contribute to the VBA and/or the Atlas of Living Australia.
<p>An unintended benefit of the forums was the strengthened connections between stakeholders. Several local government representatives noted that they often work in isolation and valued the opportunity to connect with others and share their approaches to invasive species data collection. They saw value in continuing to have this conversation so they could drive consistency between their projects.</p>	<p>Recommendation 2: Host networking events for land managers and volunteers to exchange knowledge and share updates on pest management projects.</p>
<p>The absence of accepted and standardised data formats and agreed data attributes in Victoria for pest plant and animal management was identified as a recurring challenge, suggesting that current inconsistencies between projects may be hindering the usability and sharing of weed data across systems and stakeholders. This is often due to different purposes for using the data.</p>	<p>Recommendation 3: Promote participation in collaborative initiatives by:</p> <ul style="list-style-type: none"> ▪ Facilitating CPMG involvement in a state-level multi-agency working group on data standardisation to help develop a consistent data dictionary for pest plant and animal management. ▪ Supporting the promotion of regional weed and pest management forums or conferences hosted by other organisations and encouraging CPMGs to attend and engage. Specifically where there is emphasis on collaborative projects and data collection and sharing.
<p>There were several data fields and various data attributes being used by a range of stakeholders for different purposes. A lack of clarity around what data should be collected, and how to collect it effectively, was evident across many stakeholder groups, indicating that inconsistent practices may be limiting the strategic use of weed data for planning and investment.</p>	<p>Recommendation 4: Develop an invasive species mapping decision-support tool for land managers to guide them in identifying:</p> <ul style="list-style-type: none"> ▪ the types of data fields they should collect (e.g. species name, location, date, treatment applied), ▪ the most suitable data collection systems or platforms to support this process, and ▪ the recommended data attributes (i.e. descriptive characteristics such as species density, spread rate, and treatment effectiveness) that would enhance the usefulness of the data for future planning and on-ground invasive species management activities.

1 Introduction

1.1 THE REPORT

RM Consulting Group (RMCG) was engaged by the Victorian Serrated Tussock Working Group (VSTWG), Victorian Gorse Taskforce (VGT) and the Victorian Blackberry Taskforce (VBT) to collect data and report on the opportunities and challenges associated with recording and sharing data on invasive plant species across different land tenures in Victoria. In December 2024, RMCG conducted an online survey to gather baseline data, which was followed by two forums in March and April 2025 to gather further insights and raise awareness of accessible data collection techniques.

This report provides an overview of the survey and forum findings, including the extent of weed data collection across stakeholder groups, the techniques being used, and perspectives on sharing this data to support effective weed management outcomes.

1.2 BACKGROUND

Serrated tussock, gorse, and blackberries pose a significant risk to both biodiversity and agricultural production throughout Victoria. The VSTWP, VGT and VBT are three incorporated not for profit organisations which focus their efforts on controlling these invasive species. Taking a community led- approach, these organisations collaborate with stakeholders and agencies including State Government, Catchment Management Authorities, local government, Landcare, VicRoads, and VicTrack.

A wide range of stakeholders and organisations, across different land tenures, manage invasive species. A significant obstacle to coordinated efforts is the variety of weed mapping and management systems currently used by different organisations and stakeholders to record their works data and sightings. These disparate approaches can hinder collaboration, leading to inefficient sharing of information, and can limit the impact of on-ground efforts to control invasive species.

Effective management of these invasive species requires a collaborative approach to data collection and sharing among organisations and stakeholders. To ensure this collaboration is meaningful, it's essential to undertake thorough consultation to understand the diverse needs of users. Given there are many data collection tools widely used across the state, this consultation also presents a valuable opportunity to review their pros and cons as part of the process of identifying the best options.

1.3 PURPOSE OF THE PROJECT

The purpose of the project was to identify the barriers for intra-organisational management of the three invasive species across different land tenures and to recommend platforms, systems and processes for improved collaborative data collection with stakeholders, and thus better guide management efforts. The intent of this project was to identify systems, processes, and software applications that support data sharing among all stakeholders and enable cross-tenure management of these invasive species.

The project objectives were:

- Identify key stakeholders and land managers.
- Determine the drivers and barriers for effective cross-tenure management of the four species.
- Identify the various management and mapping programs that stakeholders currently use and the stakeholders they share data with across those platforms. Determine the effectiveness of these platforms and their potential for cross-tenure management.
- Identify any additional suitable collaborative platforms and systems.
- Recommend platforms, systems and processes for improved data collection, auditing, collaboration, and data sharing.

1.4 REPORT STRUCTURE

This report is structured as follows:

- Survey findings (Section 2)
- Forum outcomes (Section 3)
- Conclusions and recommendations for the CPMGs (Section 4).

1.5 METHOD

1.5.1 OVERVIEW

RMCG conducted an online survey with participants from a broad range of stakeholder groups. The survey questions were designed to provide insight into how weed data is being collected and shared across different stakeholder groups throughout Victoria. It focused on highlighting attitudes toward data sharing, the methodologies used and the common barriers to effective collaboration in weed management. Survey questions are provided in Appendix 1.

Email invitations were sent to land managers and volunteers across an extensive network, which encompassed council representatives, Landcare volunteers and facilitators, government organisation representatives, contractors, and individuals who had previously received relevant grants through the Community Pest Management Groups. A total of 97 individuals participated in the survey, which closed in December 2024.

In March and April 2025, RMCG facilitated two forums designed in response to the survey findings. The first forum, held online on March 27, featured guest speakers from the fields of data collection, agriculture, and biodiversity databases. It focused on raising awareness of accessible tools for weed data collection and their role in supporting collaborative weed management. The second forum, held on April 4, provided a more in-depth evaluation of the survey findings, and facilitated group exercises highlight the barriers and opportunities for improving weed data collection and sharing commonly faced across stakeholder groups.

1.5.2 LIMITATIONS

It is important to note that survey respondents were either self-selected or invited through the networks engaged as part of this project. While efforts were made to reach a broad audience, the sample size and the distribution of respondents across stakeholder groups and regions are not considered representative of the broader population. As such, results should be interpreted with caution and are not suitable for extrapolation. These findings are indicative only and are intended to inform and prompt further discussion on cross-tenure data collection and sharing.

2 Survey results

2.1 SURVEY PARTICIPANTS

2.1.1 STAKEHOLDER GROUP REPRESENTATION

Local government agency representatives and rural private landholders accounted for the largest proportions of respondents (24% each) (Figure 2-1).¹ Private landholder managers were primarily associated with farms, forestry organisations or land management groups.²

Other organisations represented in the survey data include:

- **State government representatives:** These respondents accounted for 19% of survey respondents, with agencies such as Department of Energy, Environment and Climate Action (DEECA) and Agriculture Victoria represented.
- **Volunteers and volunteer group facilitators:** Volunteers from various Landcare groups across the state comprised 9% of the survey cohort.
- **Contractors:** These respondents represented small businesses and accounted for 6% of the survey respondents.
- **Private landholders:** People involved in private landholder managers (non-rural) represented 4% of the survey cohort.
- **Aboriginal Corporation:** One respondent (1%) represented an Aboriginal Corporation.

A small proportion (4%) of respondents identified themselves as not fitting into the provided categories, describing their roles as a hobby naturalist, a combination of multiple stakeholder groups, or a Landcare professional, respectively.

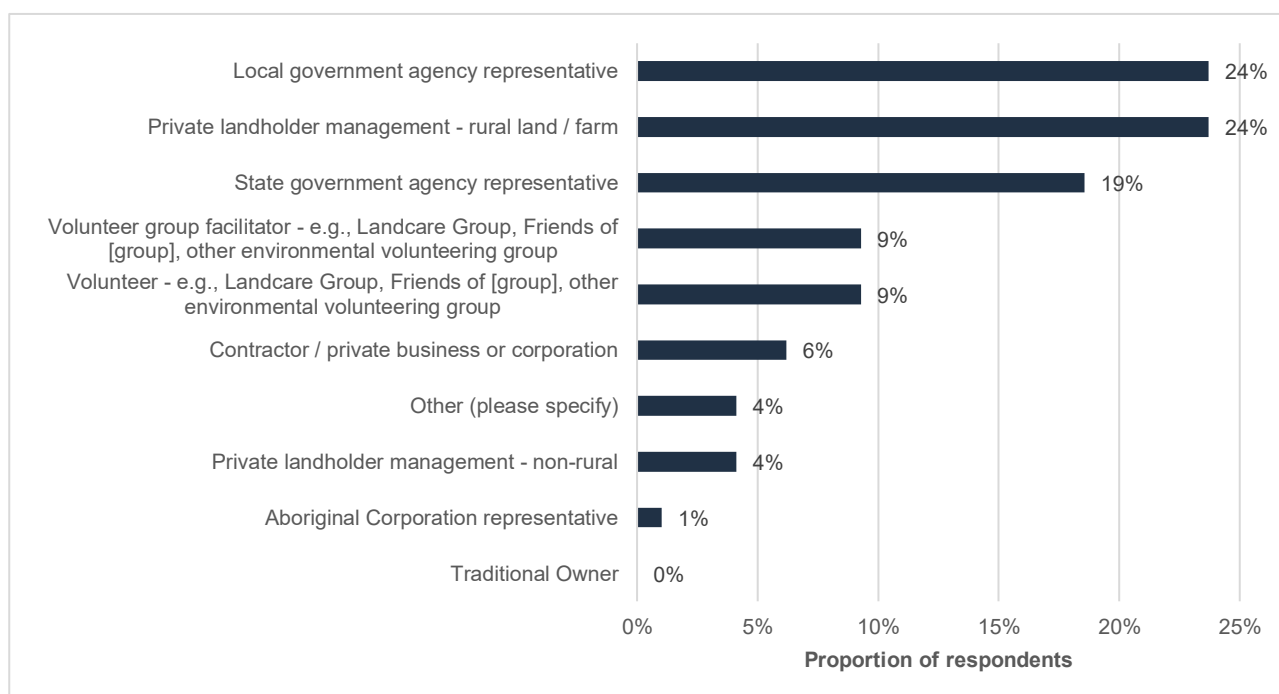


Figure 2-1: Organisations represented by survey respondents (n = 97)

¹ Based on responses to Question 1 of the survey

² Based on responses to Question 3 of the survey

2.1.2 GEOGRAPHIC REPRESENTATION

The survey sample included individuals from across Victoria, with representation from each of the state's CMA regions (Figure 2-2). The North Central region had the largest group of respondents (28%), followed by the Port Phillip/Westernport (18%) and Glenelg Hopkins (13%) regions³.

Stakeholder groups were relatively well represented across the different CMAs, though some trends were evident:

- **Port Phillip/Westernport and Wimmera** – respondents were mainly from local and state government agency representatives.
- **Glenelg Hopkins** – respondents were largely involved in private landholder management (rural land/farm).

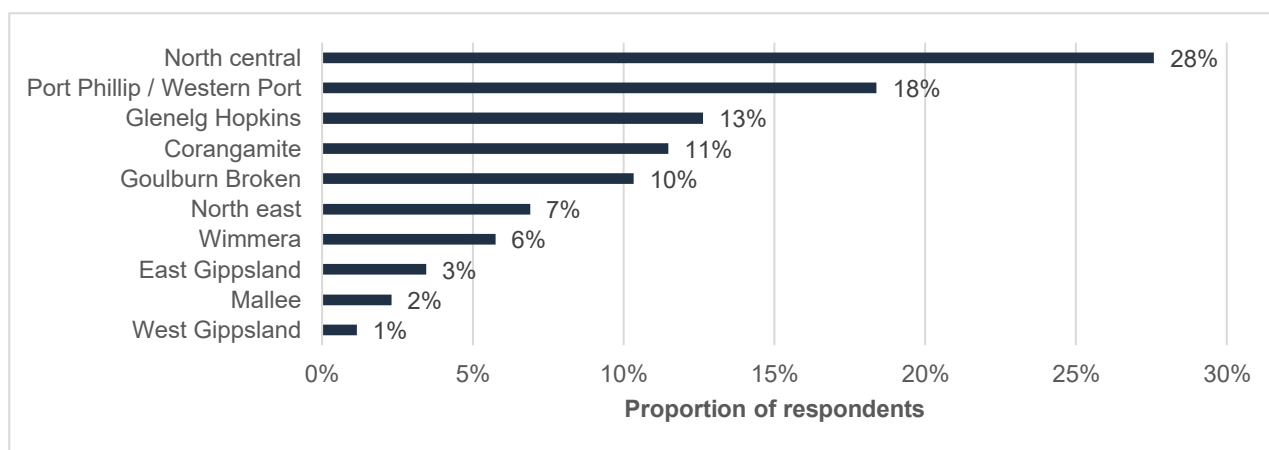


Figure 2-2: CMA regions where survey respondents were located (n = 87)

2.1.3 EXTENT OF LAND MANAGED

Respondents reported varying levels of land management responsibility (Figure 2-3). Nearly half (45%) of the respondents managed over 1,000 hectares, with the smallest number of respondents (5%) managing 501-1000 hectares. The remainder of respondents (49%) managed between 10-500 hectares.⁴

Those responsible for managing over 1,000 hectares of land were mostly from state and local government agencies. In contrast, private landholder managers – both rural and non-rural – were typically responsible for smaller quantities of land.

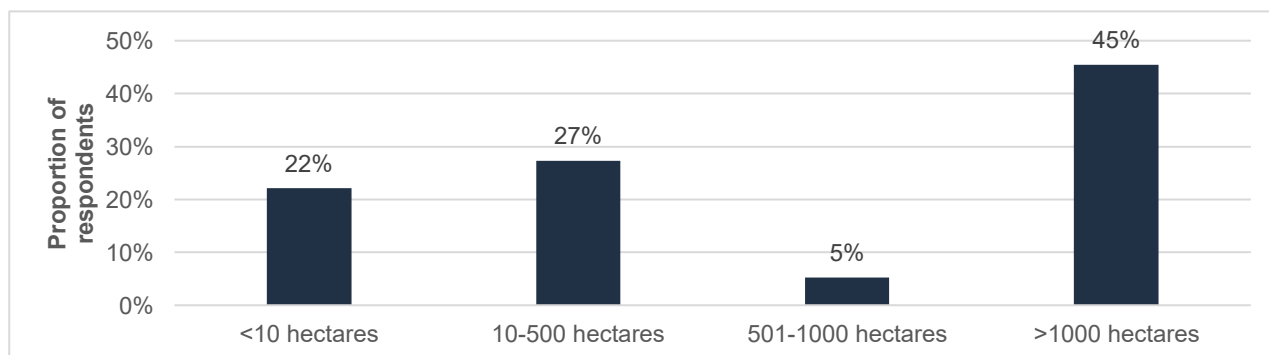


Figure 2-3: Land area managed by survey respondents (n = 77)

³ Based on responses to Question 4 of the survey

⁴ Based on responses to Question 2 of the survey

2.1.4 INVASIVE SPECIES MANAGEMENT INVOLVEMENT

Most survey participants (84%) reported they were actively managing pest plants and animals on the land they oversee (Figure 2-4). All respondents from local government agencies, the Aboriginal Corporation and private landholder management (rural land/farm) indicated they were undertaking active management, whilst state government agency representatives reported the lowest incidence of management.⁵

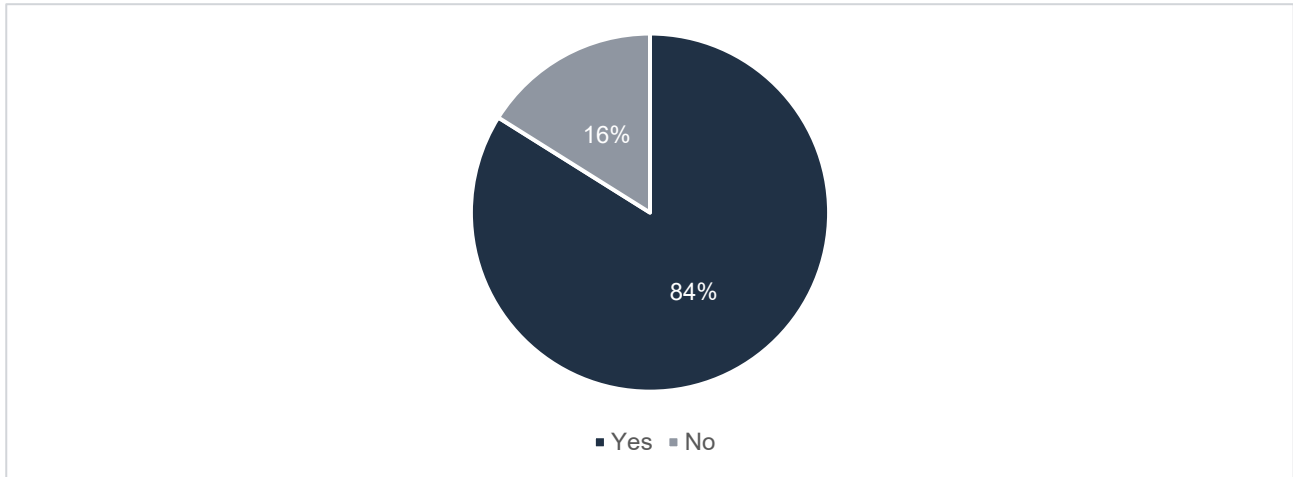


Figure 2-4: Proportion of respondents undertaking active pest plant and animal management (n = 87)

2.2 WEED DATA COLLECTION OVERVIEW

2.2.1 OVERVIEW

Overall, 69% of those who participated in the survey stated that they record information about weed species on the land they manage or volunteer on (Figure 2-5).⁶

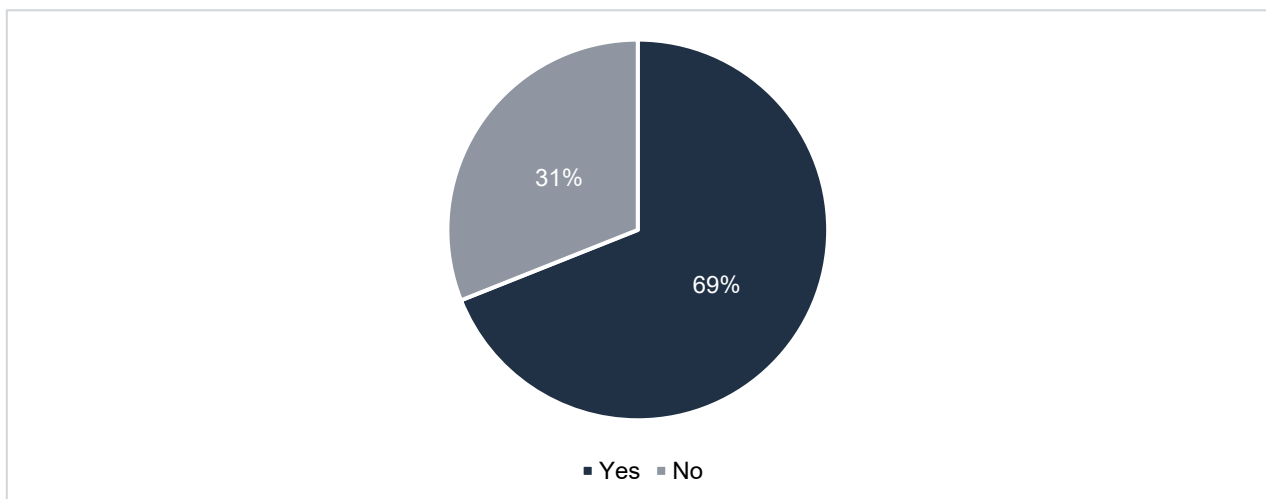


Figure 2-5: Proportion of respondents recording weed species information on land they manage or volunteer on (n = 87)

There was a clear link between the size of the land managed and the likelihood of recording data. Larger landholders were more likely to record this information, such as state and local government agency

⁵ Based on responses to Question 5 of the survey

⁶ Based on responses to Question 6 of the survey

representatives, as well as volunteer facilitators. Conversely, respondents managing smaller areas, including contractors and non-rural private landholders, were less likely to record weed data.

When examining the proportion of survey participants who record weed species data in relation to their involvement in invasive species management:

- 76% of those who actively manage invasive species on the land they manage or volunteer on reported recording weed species data.
- 43% of those who do not manage invasive species on the land they manage or volunteer on also reported recording weed species data.

2.2.2 REASONS FOR COLLECTING DATA

Survey respondents who record data on weed species identified several ways they utilise the information within their operations (Figure 2-6).⁷ The vast majority of these respondents stated that they use the data to:

- Inform where control work is required (80%)
- Record control work and assess its effectiveness (74%)
- Have a record of infestations (67%).

The remaining respondents utilise the data to:

- Inform compliance activities (46%)
- Inform environmental strategic planning (41%)
- Secure funding (36%).

These respondents also highlighted other uses such as project reporting and informing ratepayers.

These findings were relatively consistent across the stakeholder groups, with those involved with volunteer groups tending to use data to secure funding and to inform compliance activities more than other organisations.

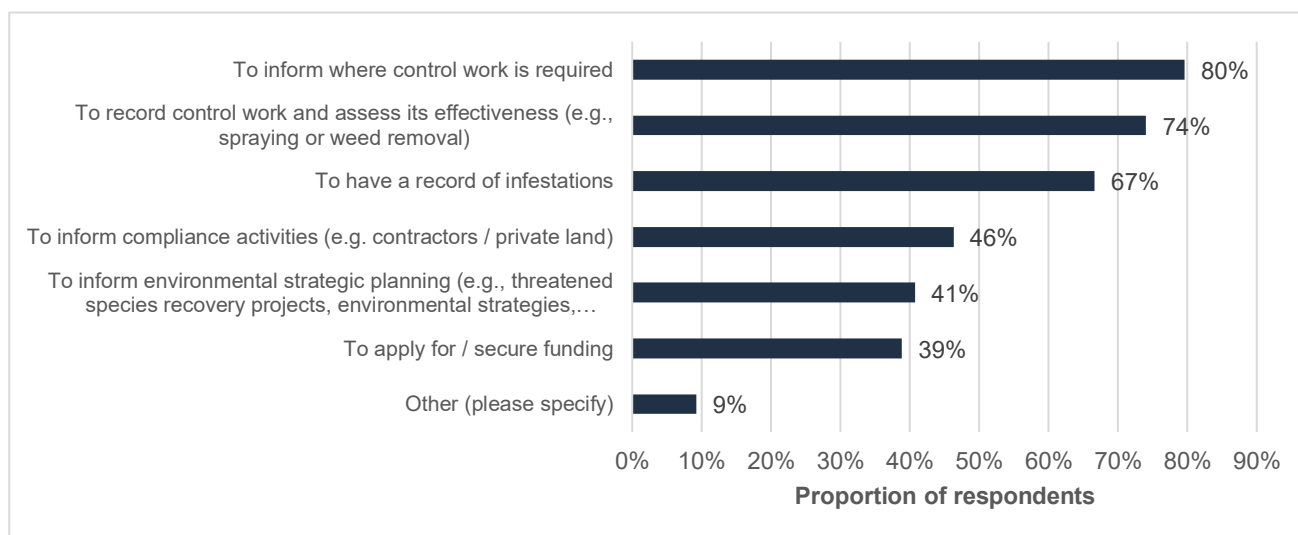


Figure 2-6: Ways in which survey respondents utilise the weed data they collect (n = 54)

2.2.3 REASONS FOR NOT COLLECTING DATA

Of the survey respondents who indicated they do not record data on weeds on the land they manage or volunteer on, almost half (42%) stated they lacked the resources to do so, whilst a further 27% indicated that

⁷ Based on responses to Question 10 of the survey

they would like to but do not know how (Figure 2-7). A smaller proportion of these participants felt that recording weed data was not useful for their purposes, or it did not align with their role.⁸

Whilst the lack of resources to record information about weed species was felt across all stakeholder groups, respondents involved in private landholder management (rural land / farm) were the most likely to state that that they would like to record weed data, though they don't know how.

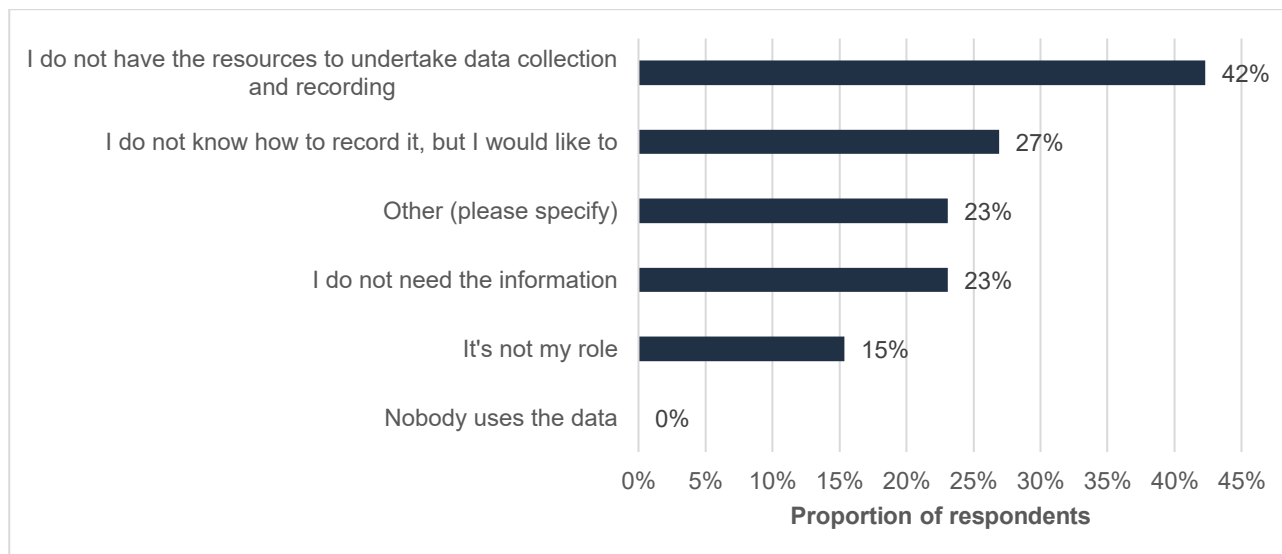


Figure 2-7: Reasons that data on weeds is not collected by survey respondents (n = 26)

2.2.4 DATA COLLECTED ON OTHER PLANTS AND ANIMALS

A small percentage of survey participants (15%) who indicated they don't record information on weeds reported that they collect spatial data about other species⁹ (Figure 2-8), namely:

- Native species the landholder / land manager finds interesting (note: specific examples were not provided, nor was there an indication of whether it was relevant to conservation status)
- Frogs
- Birds
- Rabbits.

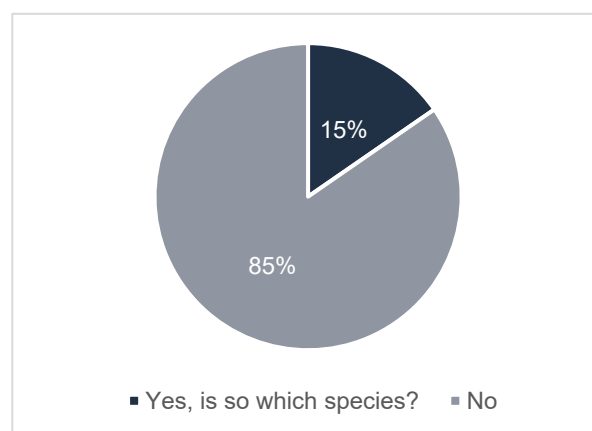


Figure 2-8: Proportion of respondents who don't record weed data who collect data about other plant and animal species (n = 26)

2.2.5 COMMON WEED SPECIES BEING RECORDED

Most survey participants who collect weed data on the land they manage or volunteer on indicated that they do so for numerous weed species (Figure 2-9). Of the species listed, blackberry was the most widely recorded species (75%), followed by gorse (69%) and Serrated Tussock (54%).¹⁰

⁸ Based on responses to Question 12 of the survey

⁹ Based on responses to Question 13 of the survey

¹⁰ Based on responses to Question 13 of the survey

Additionally, most of these respondents documented data on a variety of other noxious weeds, many of which are state prohibited, listed under the Catchment and Land Protection Act (CaLP) or classified as Weeds of National Significance (WoNS). Among these additional species, the most recorded were Chilean Needle Grass, Briar Rose, Broom species, African Feathergrass, and Paterson's Curse (Table 2-1).

These findings were relatively consistent across the participants across different stakeholder groups.

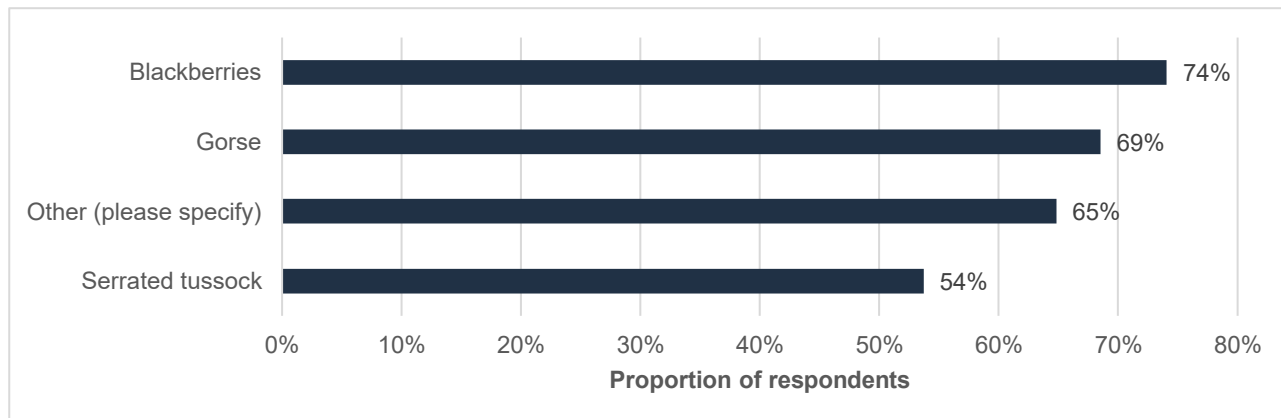


Figure 2-9: Weed species most commonly recorded by survey respondents (n = 54)

Table 2-1: Additional weed species that survey respondents collect data about

ADDITIONAL WEEDS		
African feathergrass	Cane needle grass	Paterson's curse
African honeybush	Carpet weed	Ragwort
African lovegrass	Chilean cestrum	Scotch thistle
Arrowhead	Chilean needle grass	Solider thistle
Artichoke thistle	Fireweed	Spanish Heath
Bathurst burr	Hawthorn	Spiny burr-grass
Boneseed	Honey myrtle	Spiny rush
Boxthorn	Horehound	St John's wort
Briar rose	Khaki	Sweet pittosporum
Broom spp.	Kikuyu	Wheel cactus
Buffalo grass	Myriad	Wood sorrel
Caltrop	Pampas grass	

2.2.6 TYPES OF DATA BEING RECORDED

Similarly, most survey respondents who collect data on weed species indicated that they record numerous types of information on these species (Figure 2-10).¹¹ Most of these respondents' collected information on:

- Control works such as spraying or removal (87%)
- Mapping locations of occurrences (76%)
- Mapping weed species (72%).

A number of these respondents also noted recording the hectares infected by weeds (48%) and the density of the weed infestation (43%).

Whilst most types of data were recorded across the various stakeholder groups, there was a general trend for respondents representing state government agencies to record a more varied suite of data types.

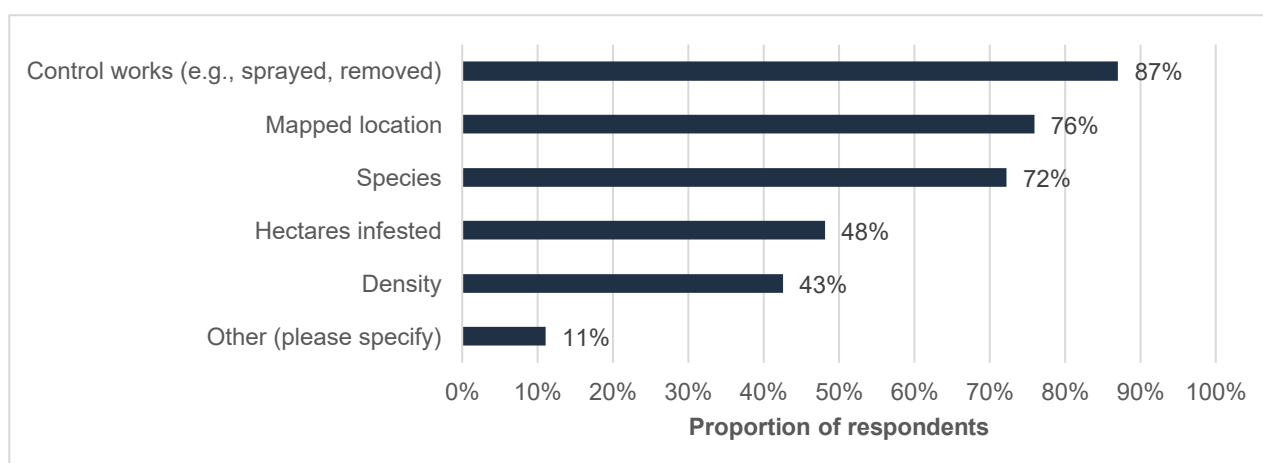


Figure 2-10: Types data collected by survey respondents (n = 54)

¹¹ Based on responses to Question 8 of the survey

2.2.7 DATA FORMATS

Survey participants who collect weed data on the land they manage or volunteer on utilised the following formats to do so (Figure 2-11)¹²:

- Point data or GPS coordinates (57%)
- Photographs (53%)
- Polygon data (47%).

A smaller number of these respondents utilised aerial maps (23%) and drone footage (9%) to record the occurrence and locations of weeds. Additionally, 25% of said respondents identified other methods of recording data, such as hard copy notes, maps and records.

Respondents representing state or local government agencies tended to record data in multiple formats when compared to other stakeholder groups.

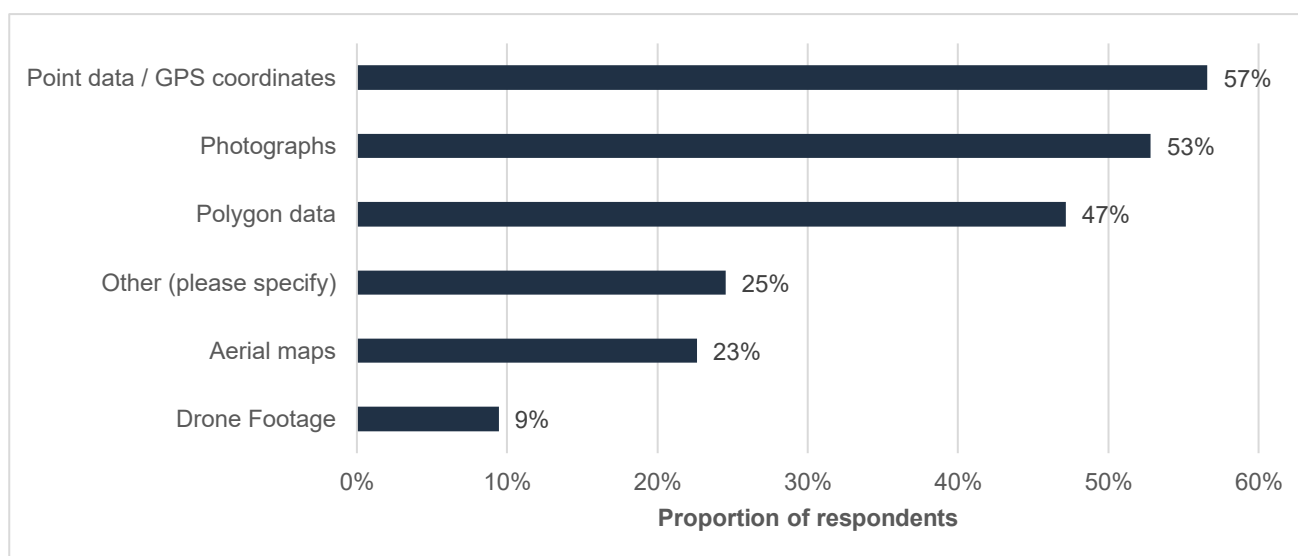


Figure 2-11: Data formats utilised by survey respondents to collect weed data (n = 53)

2.3 WEED DATA COLLECTION METHODS

2.3.1 COMMON METHODS

Respondents who collect weed data on the land they manage or volunteer on utilise a variety of methods to do so (Figure 2-12).¹³ Among these participants:

- **Digital methods** for data collection were the most used, such as Avenza, iNaturalist and WeedScan (65%).
- **GPS devices and pen and paper methods** were also commonly used by these respondents (42%).
- A small number of this group utilise **website-based systems** (4%).

Some of these participants identified other methods for data collection (46%). Most of the data collection methods identified under 'other' cross-correlated with other categories, such as iMap, LRM, Bioweb, What3Words, excel spreadsheets, Agriwebb, georeferenced images, etc.

¹² Based on responses to Question 9 of the survey

¹³ Based on responses to Question 14 of the survey

Whilst mobile applications were the most popular choice across most stakeholder groups, volunteers and those involved in private land management (rural land/farm) did not favour this approach. Many respondents in these groups preferred more informal methods of recording data such as lists, storing photographs or simply committing information to memory. In contrast, respondents from state and local government agencies typically used a broader range of data collection methods simultaneously.

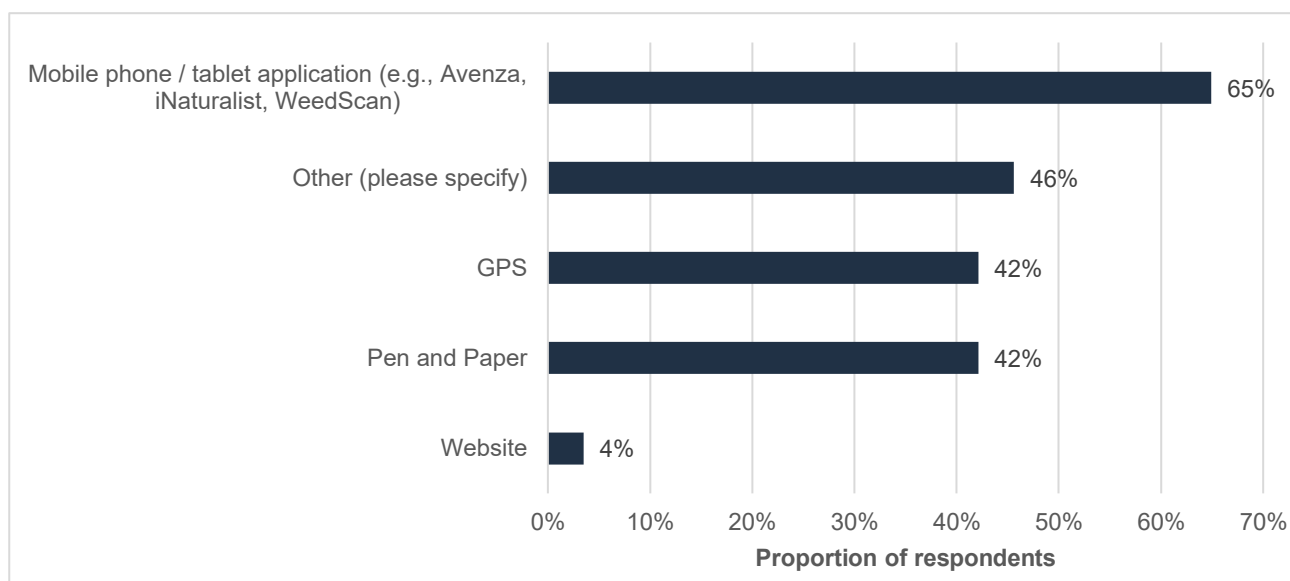


Figure 2-12: Methods utilised by survey respondents to record information on weeds (n = 57)

2.3.2 DIGITAL DATA COLLECTION METHODS

Survey respondents who use digital formats to collect weed data listed a total of 18 mobile phone or tablet applications that they use to do so (Figure 2-13).¹⁴ The most used applications were:

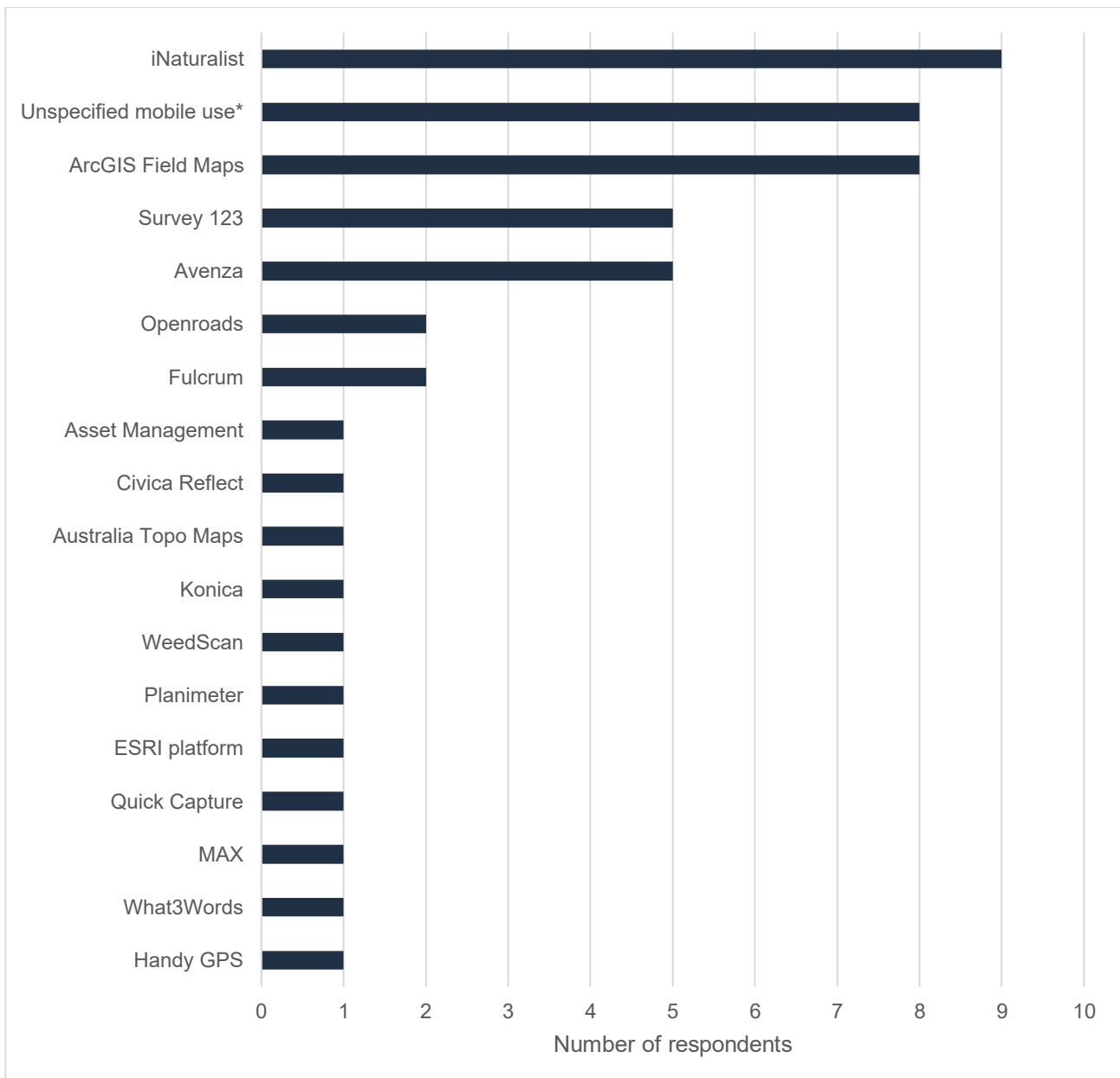
- iNaturalist (used by 24% of this group).
- ArcGIS Field Maps and unspecified mobile use (incl. GPS tracking, waypoints and photographs) (used by 22% of this group).
- Survey123 and Avenza (used by 14% of this group).

Openroads and Fulcrum were used by two of the respondents, respectively, while several other applications were each used by one respondent.

Of the most used applications:

- **iNaturalist** was widely used across most stakeholder groups.
- **ArcGIS Field Maps** was primarily used by local and state government representatives, as well as those involved in private land management (rural land/farm).
- **Avenza** was mostly used by those involved in private land management (both rural and non-rural).
- **Survey123** was favoured by local government agency representatives.
- **Mobile phones** were mostly utilised by state government representatives.

¹⁴ Based on responses to Question 15 of the survey



* Unspecified phone use GPS tracks, GPS points, photos

Figure 2-13: Mobile phone and tablet applications used by survey respondents for weed data collection (n = 37)

2.3.3 USABILITY OF DATA COLLECTION METHODS

The following results^{15 16} are summarised by the data collection methods identified in question 14 (Section 2.4.1).

Respondents noted a range of advantages and limitations associated with each of data collection method, as outlined in Table 2-2. Notably, some features that were viewed as advantages by certain participants were perceived as limitations by others, highlighting the subjectivity of operational preferences.

¹⁵ Based on responses to Question 16 (n = 50) and Question 18 (n = 18) of the survey

¹⁶ Based on responses to Question 19 (n = 44) of the survey

Table 2-2: Advantages and disadvantages of weed data collection methods as identified by survey respondents

METHOD	ADVANTAGES	LIMITATIONS
Mobile and tablet applications	<ul style="list-style-type: none"> Intuitive and easy to use, requiring minimal training. Efficient, as they allow data to be collected, stored, and analysed on a single platform. Compatible with GIS systems (i.e. Esri software) which simplifies data management and enables collaboration among teams and stakeholders. Compatible across various devices, making them ideal for teams working across multiple field locations. Useful for sharing data and live analytics quickly, which facilitates quick decision-making and progress tracking in the field. 	<ul style="list-style-type: none"> Many applications have limited offline functionality, which can be unreliable in remote fieldwork areas. Device or application malfunctions can result in lost data. Some applications require monthly or annual subscriptions, which can be prohibitively expensive for some groups.
Pen and paper	<ul style="list-style-type: none"> Straightforward, reliable and accessible, with no need for technical support, training or funding. Convenient for quick and easy data collection in the field. Part of specific organisational requirements or client specifications. 	<ul style="list-style-type: none"> Recording and organising data manually can increase the likelihood of errors. Maintaining and updating records year by year is time-consuming. Transferring paper-based data into digital systems can be difficult, making cross-platform sharing a challenge.
GPS	<ul style="list-style-type: none"> Highly accurate, which enables highly detailed mapping and analysis. Ideal for handling large quantities of data collected efficiently across multiple locations and ongoing project reporting. Useful for sharing data, making collaboration among teams and stakeholders simple. Versatile in their ability to record different types of data and track multiple variables simultaneously. 	<ul style="list-style-type: none"> Maintaining units and licensing can be prohibitively expensive for some groups. Some GPS units are limited to only recording certain types of data, such as points and tracks, and lack the capacity to record other data types, like polygons. Training is often required to become skilled in using some GPS units beyond recording basic data.
Websites	<ul style="list-style-type: none"> Easy to use and accessible to all, without the need for training. Practical for teams looking for basic data collection and sharing systems. Ideal for team-based projects, as they make data sharing easy. 	<ul style="list-style-type: none"> Some websites lack offline functionality, which can be problematic in remote fieldwork areas. Websites can often be complex, which can be limiting some users who require additional support.

2.4 WEED DATA STORAGE

2.4.1 DATA STORAGE TYPES

Most respondents who collect data on weed species on the land they manage or volunteer on utilise a variety of methods to store data, with digital storage methods being the most preferred (Figure 2-14). Around half of these respondents (51%) store their data locally on a computer, while a similar proportion (49%) use organisation specific system. A third (30%) of this group also store their data within the applications used to record it.¹⁷

Maintaining hard copy versions of data was less common (11%), as was transferring collected data into databases like the Victorian Biodiversity Atlas (4%) and Atlas of Living Australia (2%). These respondents also

¹⁷ Based on responses to Question 17 of the survey

used other storage methods (25%) including digital and hard copy maps, passing data on to another client or organisation for storage or simply committing things to memory themselves.

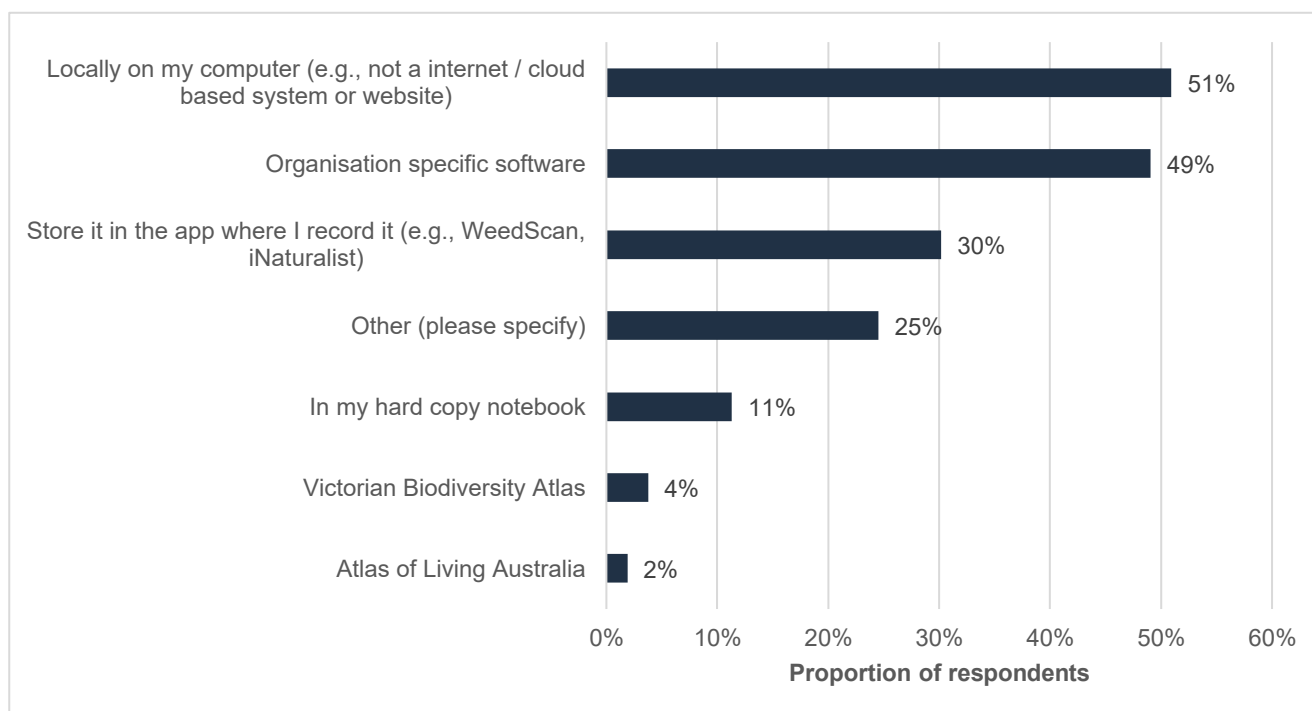


Figure 2-14: Data storage types used by survey respondents to store weed data (n = 53)

2.4.2 UPDATING STORED DATA

Most (90%) of survey participants who collect information on weeds indicated that their data could be modified and updated (Figure 2-15). This capability was consistent among these respondents, regardless of their favoured data collection method.¹⁸

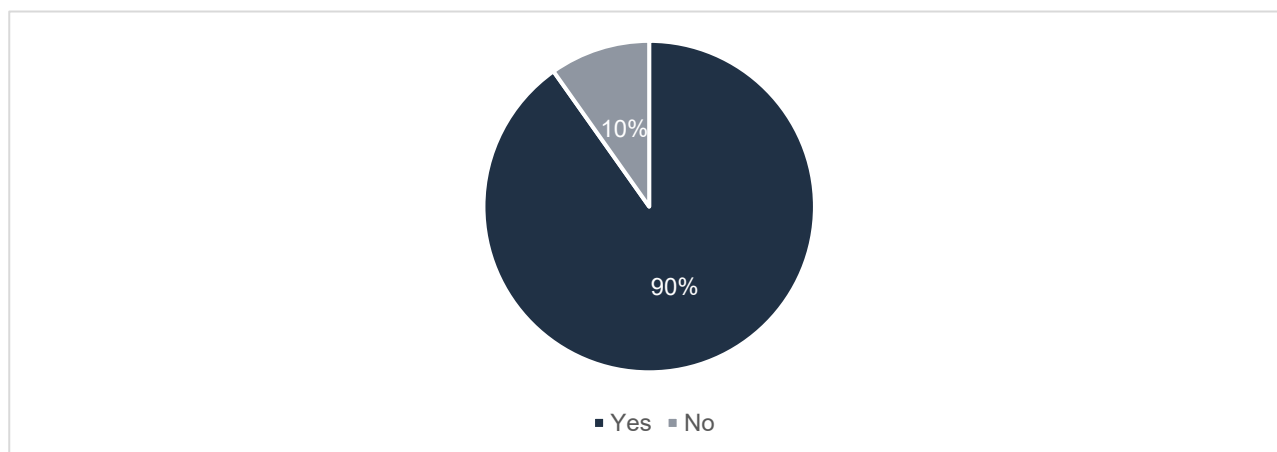


Figure 2-15: Proportion of respondents that can modified or update their stored data (n = 51)

¹⁸ Based on responses to Question 22 of the survey

2.5 WEED DATA SHARING AND COLLABORATION

2.5.1 DATA SHARING OVERVIEW

Overall, 73% respondents who record weed data stated that they had shared that information with other stakeholders in the past (Figure 2-16). Government agencies, volunteer groups and contractors reported higher instances of sharing data with other stakeholders, whereas private landholders were less likely to share data.¹⁹

The main reasons these respondents shared data and information with other stakeholders included:

- Collaborating with neighbouring landholders, land managers, public land managers, and agencies (e.g., CMA, Parks Victoria, DEECA) for effective control programs, especially on shared boundaries.
- Meeting funding and grant requirements.
- Controlling and monitoring invasive species through early weed detection, identifying hotspot areas and the ongoing monitoring of rehabilitated areas.
- Supporting landowners in identifying species for control purposes and to help local laws compliance.
- Updating stakeholders such as contractors, funding providers, or local authorities.

Where these respondents had not shared data and information, reasons included:

- Privacy concerns
- No one has ever asked for the data
- There has never been a need.

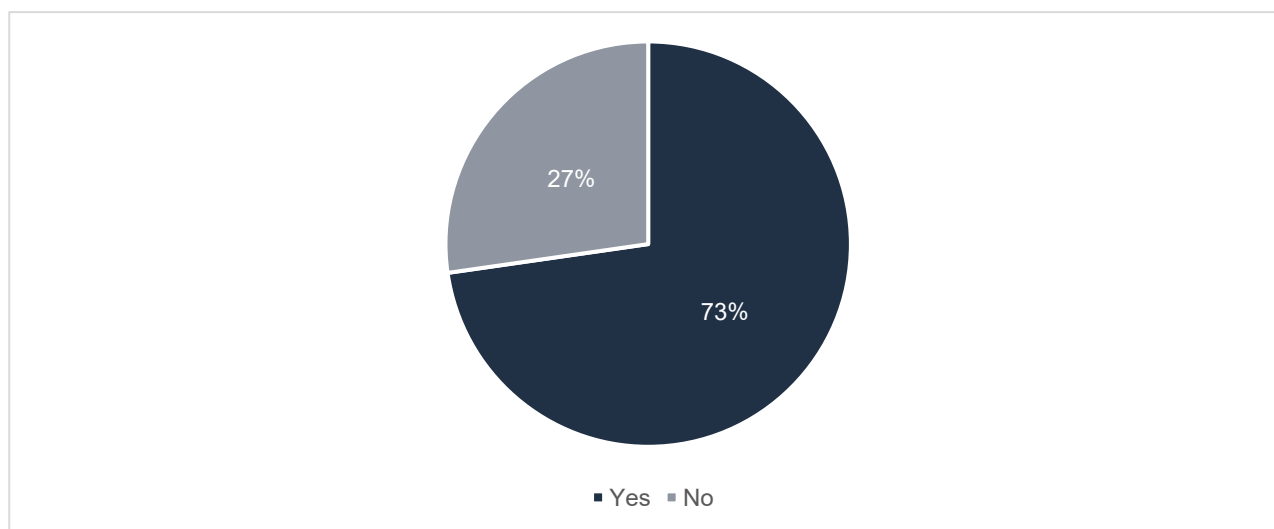


Figure 2-16: Proportion of respondents who have shared data and information collected about weeds with other stakeholders (n = 55)

2.5.2 EASE OF SHARING DATA

There were mixed sentiments among respondents who record information on weed species on the land they manage or volunteer on regarding how easy it is to share that data with other stakeholders and land managers (Figure 2-17). Almost half (47%) of these participants felt that their data couldn't be easily shared, while a high proportion (36%) believed it to be possible and easy. Two groups of these respondents (9% respectively) either felt their data could not be shared at all or found sharing to be very easy.²⁰

¹⁹ Based on responses to Question 11 of the survey

²⁰ Based on responses to Question 20 of the survey

Respondents believed their data could be shared because:

- It can easily be shared through email, text messages and can be downloaded.
- It can be desensitised to remove names and addresses before being shared.

Respondents believed their data could not be shared because:

- It raises complications with ownership, intellectual property rights and privacy.
- Some organisations have internal policies and procedures which limit the sharing of data with other stakeholders and communities.
- Some data is highly specialised and requires specific software or skills (i.e. using shapefiles).
- There is a lack of training amongst staff, with many unfamiliar with how to share different data sources.
- The data they collect is for personal use and is not intended to be shared with other stakeholders.

Survey participants who utilised mobile or tablet applications or GPS units to record information on weeds were more likely to find sharing data easier. In contrast, those who relied on pen and paper found it more challenging.

Generally, respondents involved in private landholder management (e.g., rural land or farms) tended to perceive data sharing as more difficult.

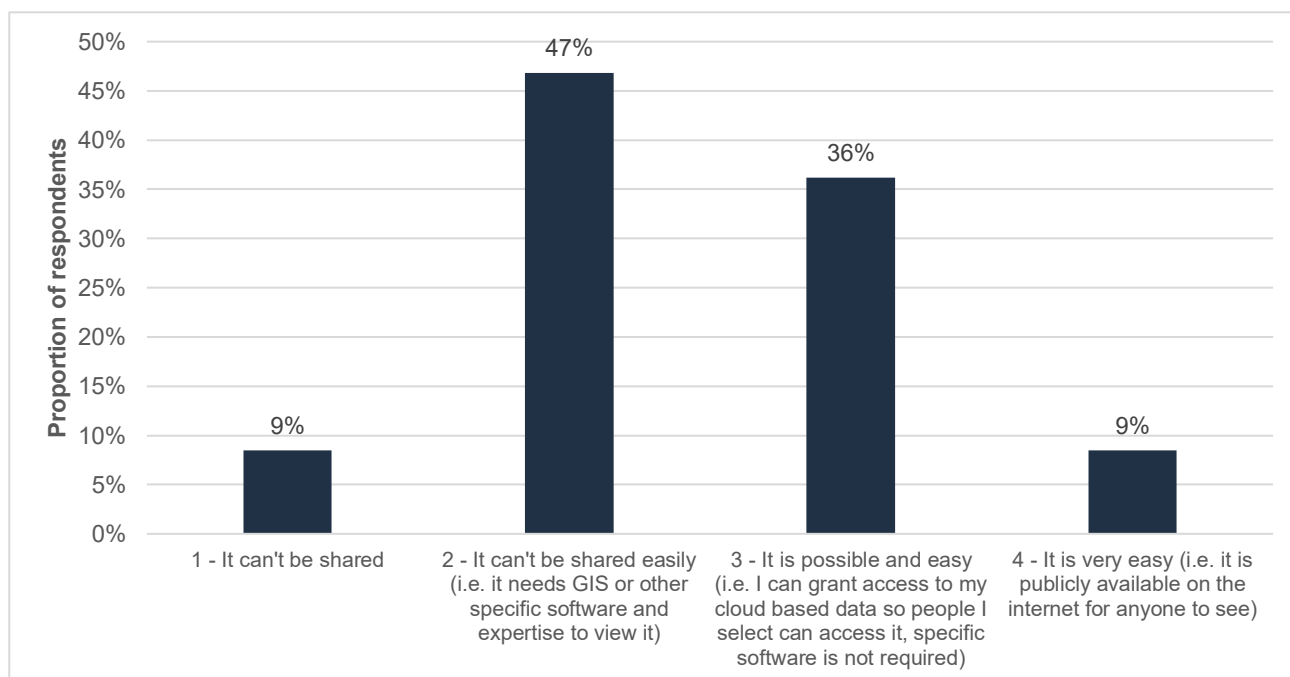


Figure 2-17: Perceived ease of sharing weed data with other stakeholders and land managers, as reported by survey respondents (n = 47)

2.5.3 DATA COLLECTION METHODS AND COLLABORTATION

Most survey respondents (88%) who record weed data believe that the method they use to record information helps them work collaboratively with others (Figure 2-18).²¹

The main reasons these respondents thought their method of recording helped them work collaboratively were:

²¹ Based on responses to Question 21 of the survey

- GPS points and other digital data can be shared efficiently, allowing multiple users (e.g., contractors, agencies) to access and collaborate on the same information in real-time.
- Visualising data helps other departments and stakeholders understand treatment methods, scope of work and strategy.
- Common systems (i.e. GPS tools and shared platforms) enable efficient collaboration between groups.

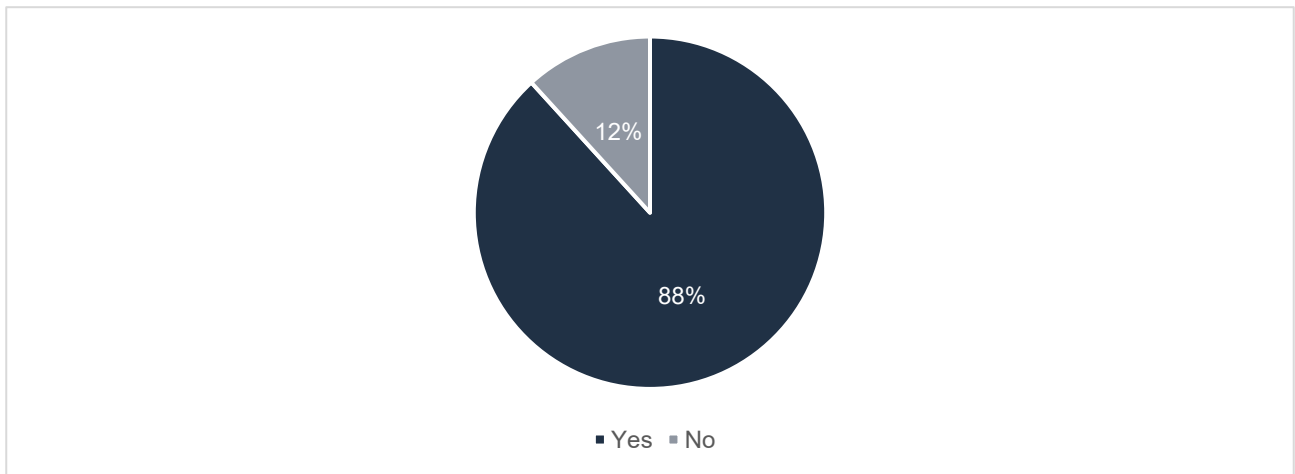


Figure 2-18: Proportion of survey respondents who believe their preferred recording method aids collaboration (n = 51)

2.5.4 WILLINGNESS TO SHARE DATA

Overall 78% respondents who collect weed data indicated they would be willing to share their data to collaborate with other land managers (Figure 2-19). Among those respondents who were not comfortable sharing their data (22%), most cited concerns about privacy, data ownership or potential commercial implications. A small number believed their data would not be beneficial to others.²²

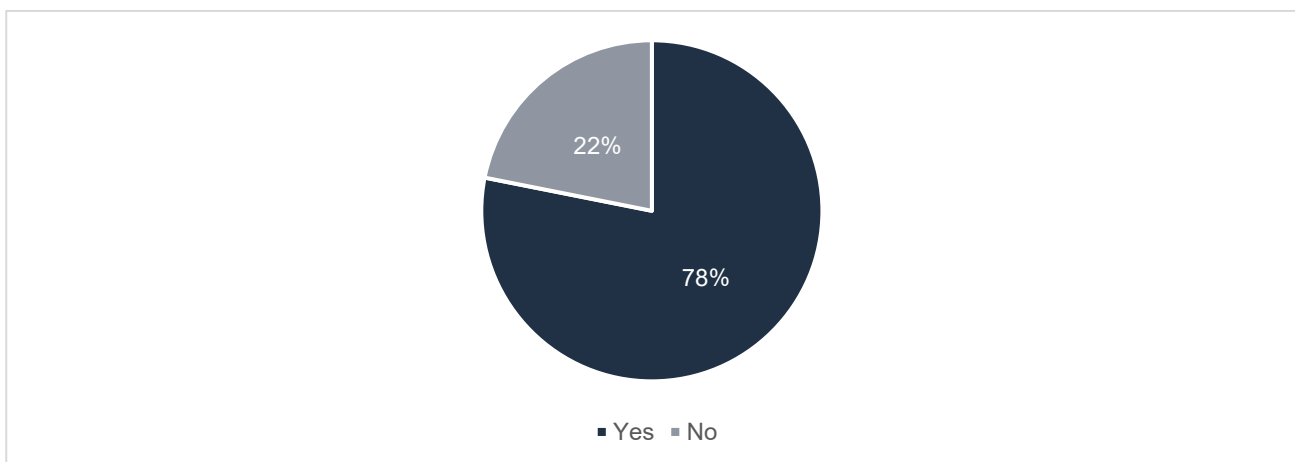


Figure 2-19: Proportion of survey respondents indicating a willingness to share data in the future (n = 64)

²² Based on responses to Question 25 of the survey

2.6 BARRIERS TO DATA COLLECTION

2.6.1 CHALLENGED ASSOCIATED WITH REGIONAL DATA COLLECTION AND MAPPING

Respondents who collect weed data on the land they manage or volunteer on identified the following as key sources of frustration when collecting data and mapping weeds in their region:²³

- There is limited collaboration between land managers, with no centralised approach to data collection and often limited coordinated approaches to infestations.
- Funding for weed control programs is often limited, which creates barriers for volunteer participation and consistency in delivering programs.
- Some data collection methods are limited by poor reception, data formats and privacy concerns, which can lead to inconsistent data collection.
- Not all stakeholders are aware of data collection tools like WeedScan and iNaturalist or may not be interested in managing weeds.

2.7 STAKEHOLDER INSIGHTS ON CHALLENGES FOR COLLABORATIVE MANAGEMENT

2.7.1 IMPACT OF DATA COLLECTION CHALLENGES ON WEED MANAGEMENT

Over half of the survey respondents (59%) stated that frustrations with weed data collection and mapping were not their biggest concern regarding weed management (Figure 2-20). Most respondents indicated that it had a medium (59%) to low (19%) impact on their ability to manage weeds effectively. In comparison, 11% of respondents (contractors, volunteer groups and private landholders) identified their frustrations as a major barrier to delivering works. Only 11% of respondents indicated that they were unsure whether data collection challenges impacted their work.

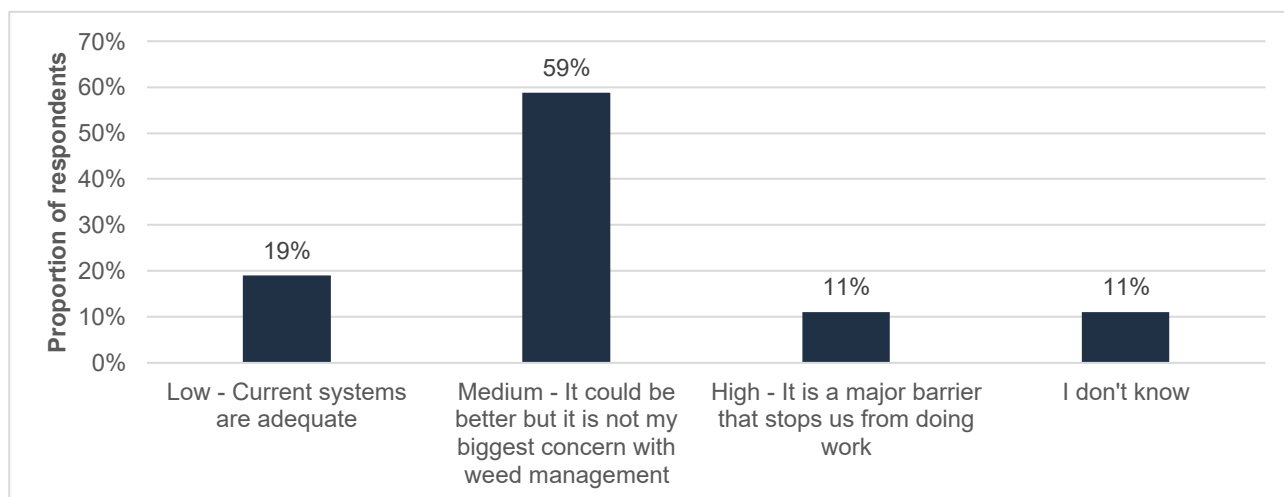


Figure 2-20: Levels of frustration among survey respondents regarding weed collection and mapping (n = 63)

2.7.2 COLLABORATIVE WEED MANAGEMENT AWARENESS

²³ Based on responses to Question 23 (n = 44) of the survey

Most survey participants (86%) indicated they were aware of examples of land managers collaborating on weed management (Figure 2-21). Respondents noted that they had seen many general examples of instances where councils, government agencies, private landholders and community groups work together to address weed occurrences. Specific examples are included in Table 2-3.²⁴

Table 2-3: Examples of collaborative land management as highlighted by survey respondents

Collaboration opportunities	Specific example
Joint management	<ul style="list-style-type: none"> DEECA, Parks Victoria, Glenelg Hopkins CMA and Gunditj Mirring work across tenures and share data. VLine, local government, Australian Rail Track Corporation (ARTC) and Department of Transport (DoT) performing weed management on linear reserves. DEECA, Parks Victoria, Melton Shire Council and Wyndham Shire Council deliver weed control in grasslands. Local government, Agriculture Victoria, Parks Victoria and DEECA deliver weed management in Western Grassland Reserve. Bellarine Catchment Network, Parks Victoria, City of Greater Geelong and Bellarine Landcare manage spiny rush. Nillumbik, Melbourne Water, DEECA, Department of Transport and Planning (DTP) and Metro Trains undertake treatment of roadside infestations and reserves at the same time as private property inspections. All these organisations share weed data.
Shared data	<ul style="list-style-type: none"> GORCAPA share weed data and support Landcare groups to use iNaturalist. Moorabool Landcare Network and the Moorabool Catchment Landcare Group - both work hand in hand to share information of weed infestations and to manage outbreaks. Their work covers large areas of the Shire and they work with community members, Council and other government agencies.
Shared funding	<ul style="list-style-type: none"> The Victoria Gorse Taskforce accesses funding to assist private landholders and Parks Victoria manage infestations. The Buloke Shire Environmental Officer contacts all Landcare groups in the network to let them know that she has funding available for weed and rabbit infestations. Members of the Landcare groups will share their 'hotspots' with her. She will drive out and observe the hotspots, map them and send contractors out to treat them. Goulburn Broken CMA funds weed control along waterways. Victorian Landcare Grants.
Programs	<ul style="list-style-type: none"> Good Neighbour Program with Parks Victoria and DEECA. Melbourne Water is involved with willow removals along Deep Creek. Victorian Gorse Taskforce (VGT) Programs. Private landholders in Ashbourne region take part in Ashbourne Landcare Group's VGT funded Community Gorse Program.
Forums	<ul style="list-style-type: none"> Up2Us Landcare Alliance in collaboration with Mansfield Shire hold an annual weeds forum, with DEECA, Vic Roads, Taungurung Land and Waters Council, Goulburn Murray Water, Parks Vic, Hancock Plantations and Goulburn Broken CMA to share information on weed control works across the Mansfield region. We aim to find opportunities to collaborate, strategically managing weeds on adjoining private and public land and roadsides as well as avoid double up spraying or missed areas. Our issue is sharing data and mapping.

Some respondents noted collaboration between land managers is often limited by:

- Different organisational systems, roles and time frames which make it difficult to coordinate concurrent delivery of weed management.
- Changes in staff, particularly in larger organisation and departments, which make it difficult contact key stakeholders.
- Organisations or groups that have data sharing restrictions, or don't have any data to share at all.

²⁴ Based on responses to Question 26 of the survey

- Limited budgets to deliver on ground weed monitoring and control programs.
- The perception that weed removal and monitoring is a low priority.
- The lack of promotion of programs which focus on weed management

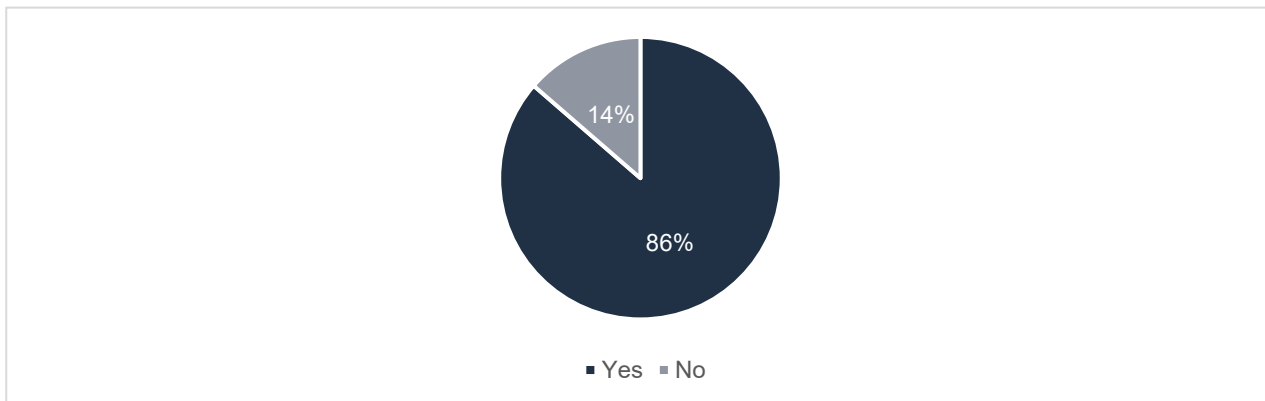


Figure 2-21: Proportion of survey respondents aware of land managers working collaboratively (n = 66)

2.7.3 ADDITIONAL COMMENTS

A few key recommendations and concerns were raised by respondents:²⁵

- The industry needs to do more to share data and facilitate collaboration, with some suggesting the creation of a centralised weed database to incorporate different levels of data.
- Funding for control work should be increased to enable the delivery of targeted, flexible and sustained weed management.
- A need was expressed for stronger council enforcement on private land to reduce weed spread.
- Some called for improved weed management on public land to reduce the spread to private and council land, with one respondent specifically mentioning they would like to see the gorse around Chewton controlled.

Respondents also provided suggestions and ideas that could be investigated:

- One respondent recommended assessing land capability to determine if certain landscapes are more susceptible to weed invasion, which could enhance weed control planning.
- One respondent indicated they would be happy to showcase the data collection methods used at Phillip Island Nature Parks.
- Another respondent noted that "Open Road" (<https://www.openrd.au/>) is a great start up initiative and could be explored further.

²⁵ Based on responses to Question 31 (n = 28) of the survey

3 Forum outcomes

3.1 FORUM 1: ONLINE INFORMATION SESSION

The first forum was held online via Zoom, on the 27th of March, and had 23 attendees. These participants represented a range of stakeholder groups including local and state government representatives, private land managers, volunteer groups and land management businesses.

The session was recorded and uploaded to SharePoint, for the benefit of the several people that reached out who were unable to attend and were interested in watching the session back.

In addition to presenting key findings from the cross-tenure weed data mapping survey, the forum focussed on showcasing successful collaborations and data sharing efforts, with the aim of raising awareness of accessible tools for weed data collection and their role in supporting collaborative weed management. To achieve this, the session featured four guest presentations from experts in the fields of data collection, agriculture, and biodiversity databases:

- **Harley Schinagl (TerraLab)** – showcased a few case studies demonstrating effective weed data collection and sharing in practice, highlighting how tools such as the STA logger can be used to facilitate collaborative weed management.
- **Baxter Massey (WeedScan)** – provided an overview of the WeedScan application, emphasising its accessibility as a free, user-friendly tool for weed data collection and collaboration.
- **Tony Dugdale (Agriculture Victoria)** and **Vanessa Hutchins (Wyndham City Council)** – discussed the use of satellite imagery to identify outbreaks of Serrated Tussock in the Western Grasslands Reserve, focussing on how data sharing contributed to the project's success.
- **Andrew Turley (Atlas of Living Australia)** – provided an overview of the ALA, explaining how data collected through applications like WeedScan is integrated into the database and how this can be used to support collaboration.

Each presentation was followed by a Q&A session, sparking discussions among participants. The conversations highlighted strong interest in the STA logger and WeedScan tools, as well as enthusiasm for the potential of utilising satellite imagery for the remote sensing of other significant weed species.

3.2 FORUM 2: WORKSHOP ON IMPROVING WEED DATA SHARING: BARRIERS AND OPPORTUNITIES

3.2.1 FORUM SUMMARY

The second forum was held on the 4th of April, at the Mercure Convention Centre in Ballarat. Ten people attended the session, all of whom were involved in managing invasive plant species either through their professional or volunteer roles. Attendees included representatives from various councils across Victoria, government agencies such as Parks Victoria and Agriculture Victoria, as well as members of community pest management groups.

The session featured a guest presentation from Tony Dugdale (Agriculture Victoria) and Vanessa Hutchins (Wyndham City Council), who expanded on the remote sensing project in the Western Grasslands Reserve to highlight the practical challenges associated with collecting and sharing large volumes of data across collaborating organisations. Delivered in a casual format, the presentation encouraged questions throughout which sparked valuable group discussions.

Building on the themes raised in the presentation, participants shared their own experiences in weed species management, identifying common enablers and challenges in data collection and sharing across organisations and land tenures. Findings from the survey were used to guide the discussion, to ensure the exploration of the barriers often faced by groups not directly represented at the forum such as private landholders and smaller organisations.

Following the discussion, participants took part in a workshop exercise to develop practical recommendations for addressing the challenges identified.

In addition to the key points outlined below, the forum provided a valuable networking opportunity. It helped raise awareness of the different initiatives underway across organisations and several participants noted they had made new connections for potential future collaboration.

3.2.2 ENABLERS FOR WEED DATA COLLECTION AND SHARING

Below is a summary of the key enablers raised during discussions, which participants identified as factors that contribute to effective weed data collection and management:

- **Adequate funding** – sufficient financial support ensures that projects involving weed data collection and sharing sustainable.
- **Strong networks** – strong relationships between land managers, both within and across organisations, encourage collaboration and maintain motivation.
- **Free and accessible spatial tools** – spatial applications and software such as QGIS, WeedScan and iNaturalist make it easier for people to collect and share weed data, encouraging increased participation.
- **Project momentum** – Large or high-profile projects help maintain engagement and generate interest in innovative projects that utilise weed data.
- **Supportive leadership** – The ability to “negotiate up” through management chains increases support for weed management programs.

3.2.3 BARRIERS FOR WEED DATA COLLECTION AND SHARING

Below is a summary of the key barriers to effective weed data collection and sharing raised during discussions, along with suggestions for overcoming these barriers which were developed collaboratively by the group during the workshop exercise.

Table 3-1: Common barriers to successful collaborative weed data collection and sharing and suggestions to overcome these challenges.

BARRIER	SUGGESTION
Lack of connection between land managers and organisations across industry	Increase networking among land managers to reduce isolation, improve awareness of available data collection resources and methods available and encourage collaboration among organisations.
Lack of private landholder understanding or acceptance	Strengthen engagement with private landholders to build trust and promote the mutual benefit of sharing weed data.
Lack of awareness of collaborative weed management projects	Promote successful collaborative weed mapping projects to raise awareness of what effective collaboration can achieve and to highlight opportunities for improvement.
Lack of centralised database	Raise awareness of the VBA and its value as a centralised planning tool to encourage broader data contributions. *One recognised limitation of the VBA is its currency. Despite that, forum participants encouraged its use because the data is vetted and informs <i>Strategic Management Prospects</i> which often guides state government investment in environmental projects.
Complications with different data formats	Support platforms that can accept and standardise various data types (e.g. points, polygons, detailed, generalised), to cater to varying data needs across stakeholder groups.

4 Conclusions

4.1 FINDINGS SUMMARY

Most land managers and volunteers who participated in our survey collect data on weeds to support their own pest species management practices, whilst those who do not collect such data largely feel they lack the resources to do so.

In general terms, survey participants record weed data in a variety of formats and using a large range of tools to do so. Mobile phone and tablet applications are the most favoured data collection tool among respondents; however GPS units and pen and paper are still widely used.

Many respondents indicated that they have shared weed data with others to coordinate efforts, secure funding, or support reporting, whilst those who haven't shared data stated that issues such data ownership, internal policies and limited staff training are limiting factors.

Forum discussions highlighted key enablers and barriers to effective weed data collection and sharing. Free spatial tools (e.g. iNaturalist, WeedScan, QGIS), strong networks, and project momentum were seen as enablers, while a lack of funding, inconsistency in data attributes, public misconceptions about privacy, and outdated records in the VBA were identified as challenges.

Forum attendees also explored practical solutions to overcome these barriers in the short term. Suggestions included increasing promotion and awareness of innovative collaborative weed mapping projects, creating more networking opportunities, and improving engagement with private landholders. There was also strong support for promoting the VBA as a centralised database, alongside the need for a platform that can accept data in multiple formats and various data attributes.

4.2 RECOMMENDATIONS

The challenges surrounding data collection, storage and sharing is complex, and it is not within the remit of the Community Pest Management Groups to address all the challenges. However there are some areas where the CPMGs could influence better data collection and sharing as we have outlined below in the recommendations.

Table 4-1: Conclusions and recommendations

CONCLUSION	RECOMMENDATION
<p>There appears to be limited awareness of successful collaborative weed mapping projects, which may be contributing to missed opportunities for learning, coordination, and the adoption of effective practices.</p> <p>Forum discussions also highlighted the importance of contributing to the Victorian Biodiversity Atlas (VBA), noting that it contains verified data and informs the Strategic Management Prospects tool, which guides state government investment in high-value environmental projects. As a result, participants supported the use of applications that feed into the VBA to ensure local data can inform broader strategic planning and funding decisions.</p>	<p>Recommendation 1: Promote best practice in weed data collection, collaboration, and sharing by:</p> <ul style="list-style-type: none">▪ Promoting successful collaborative weed mapping projects through case studies, presentations at events and / or social media to raise awareness of what effective collaboration can achieve and to highlight opportunities for improvement.▪ Encouraging the use of data collection tools such as WeedScan and iNaturalist that contribute to the VBA and/or the Atlas of Living Australia.

CONCLUSION	RECOMMENDATION
<p>An unintended benefit of the forums was the strengthened connections between stakeholders. Several local government representatives noted that they often work in isolation and valued the opportunity to connect with others and share their approaches to invasive species data collection. They saw value in continuing to have this conversation so they could drive consistency between their projects.</p>	<p>Recommendation 2: Host networking events for land managers and volunteers to exchange knowledge and share updates on pest management projects.</p>
<p>The absence of accepted and standardised data formats and agreed data attributes in Victoria for pest plant and animal management was identified as a recurring challenge, suggesting that current inconsistencies between projects may be hindering the usability and sharing of weed data across systems and stakeholders. This is often due to different purposes for using the data.</p>	<p>Recommendation 3: Promote participation in collaborative initiatives by:</p> <ul style="list-style-type: none"> ▪ Facilitating CPMG involvement in a state-level multi-agency working group on data standardisation to help develop a consistent data dictionary for pest plant and animal management. ▪ Supporting the promotion of regional weed and pest management forums or conferences hosted by other organisations and encouraging CPMGs to attend and engage. Specifically where there is emphasis on collaborative projects and data collection and sharing.
<p>There were several data fields and various data attributes being used by a range of stakeholders for different purposes. A lack of clarity around what data should be collected, and how to collect it effectively, was evident across many stakeholder groups, indicating that inconsistent practices may be limiting the strategic use of weed data for planning and investment.</p>	<p>Recommendation 4: Develop an invasive species mapping decision-support tool for land managers to guide them in identifying:</p> <ul style="list-style-type: none"> ▪ the types of data fields they should collect (e.g. species name, location, date, treatment applied), ▪ the most suitable data collection systems or platforms to support this process, and ▪ the recommended data attributes (i.e. descriptive characteristics such as species density, spread rate, and treatment effectiveness) that would enhance the usefulness of the data for future planning and on-ground invasive species management activities.

Appendix 1: Survey Questions

Cross-tenure Weed Data Collection and Sharing

Introduction

Purpose of the survey

To identify the opportunities and barriers for recording and sharing data on invasive plant species across different land tenures.

The survey has been extended to Friday 6th December at 5pm.

How will the information from the survey be used?

The results from the survey will be summarised into a report for The Victorian Serrated Tussock Working Party (VSTWP), the Victorian Gorse Taskforce (VGT) and the Victorian Blackberry Taskforce (VBT).

The report will also be distributed to organisations responsible for invasive species data collection in Victoria. It will serve as a foundation for the VSTWP project aimed at enhancing data sharing practices for the mapping and management of invasive species. This will include Victorian Government and Invasive Species Peak Bodies to guide the development of invasive species community data collection applications.

We have also included the option to provide an Executive Summary of the report to those who complete this survey. Should you wish to receive a copy, please add your email address at the end of the survey. The Executive Summary will be sent out in early 2025 and de-identified.

Background

Serrated tussock, gorse and blackberries pose a significant risk to both biodiversity and agricultural production throughout Victoria. The VSTWP, VGT and VBT are three incorporated not for profit organisations which focus their efforts on controlling these invasive species. Together, these groups are interested in opportunities to enhance data collection and sharing to drive targeted invasive weed control across Victoria and facilitate community input. RM Consulting Group have been engaged by the VSTWP, VGT and VBT to undertake this project, with funding provided by the Victorian Government Partnerships Against Pests Program 2024.

The survey should not take any more than 15 minutes to complete. Thank you for participating.

* 1. Which answer best describes you?

- Private landholder management - rural land / farm
- Private landholder management - non-rural
- State government agency representative
- Local government agency representative
- Aboriginal Corporation representative
- Volunteer - e.g., Landcare Group, Friends of [group], other environmental volunteering group
- Volunteer group facilitator - e.g., Landcare Group, Friends of [group], other environmental volunteering group
- Contractor / private business or corporation
- Other (please specify)

Cross-tenure Weed Data Collection and Sharing

2. Approximately how much land are you or your organisation responsible for managing?

- Less than 10 hectares
- 10-500 hectares
- 501-1000 hectares
- Greater than 1000 hectares

Cross-tenure Weed Data Collection and Sharing

3. If you're comfortable doing so, could you tell us which organisation you represent?

4. Where are you located? (refer to map below for assistance)

- North central
- North east
- Port Phillip / Western Port
- Corangamite
- West Gippsland
- East Gippsland
- Wimmera
- Mallee
- Glenelg Hopkins
- Goulburn Broken

Map Source: Vic Catchments



* 5. Are you undertaking active pest plant and animal management on the land you manage?

- Yes
- No

* 6. Do you record information about weed species on the land you manage or volunteer on?

- Yes
- No

Cross-tenure Weed Data Collection and Sharing

Collecting data about weed species

7. Which weeds do you collect information about?

- Blackberries
- Gorse
- Serrated tussock
- Other (please specify)

8. What kind of information do you collect?

- Species
- Mapped location
- Hectares infested
- Density
- Control works (e.g., sprayed, removed)
- Other (please specify)

9. In what format do you record this information?

- Polygon data
- Point data / GPS coordinates
- Photographs
- Aerial maps
- Drone Footage
- Other (please specify)

10. How do you use the information you collect?

- To have a record of infestations
- To inform where control work is required
- To record control work and assess its effectiveness (e.g., spraying or weed removal)
- To inform compliance activities (e.g. contractors / private land)
- To inform environmental strategic planning (e.g., threatened species recovery projects, environmental strategies, management plans etc.)
- To apply for / secure funding
- Other (please specify)

* 11. Have you ever shared that information with others?

- Yes
- No

Why?

Cross-tenure Weed Data Collection and Sharing

* 12. What are the main reasons you do not record information about weeds on the land you manage or volunteer on?

- I do not have the resources to undertake data collection and recording
- I do not need the information
- It's not my role
- I do not know how to record it, but I would like to
- Other (please specify)

* 13. Do you record information about the location of any other species (plants or animals) on the land you manage? e.g., native flora or fauna, animals, livestock

- No
- Yes, is so which species?

Cross-tenure Weed Data Collection and Sharing

Data collection methods

14. What methods do you use to record information about weeds on the land you manage or volunteer on?

- Mobile phone / tablet application (e.g., Avenza, iNaturalist, WeedScan)
- Pen and Paper
- GPS
- Website
- Other (please specify)

Cross-tenure Weed Data Collection and Sharing

Data collection methods

* 15. Which mobile application/s or websites do you use to collect data about weeds? (e.g., Avenza, iNaturalist, WeedScan)

Cross-tenure Weed Data Collection and Sharing

Data collection methods

16. Why do you use this (or these) method/s of recording information?

17. How do you store the data you collect?

- Locally on my computer (e.g., not a internet / cloud based system or website)
- In my hard copy notebook
- Atlas of Living Australia
- Victorian Biodiversity Atlas
- Organisation specific software
- Store it in the app where I record it (e.g., WeedScan, iNaturalist)
- Other (please specify)

18. What is the most useful aspect of this (or these) method/s of recording information?

19. What are the limitations of this (or these) method/s of recording information?

20. When you record information, how easy is it to share your data with others?

- 1 - It can't be shared
- 2 - It can't be shared easily (i.e. it needs GIS or other specific software and expertise to view it)
- 3 - It is possible and easy (i.e. I can grant access to my cloud based data so people I select can access it, specific software is not required)
- 4 - It is very easy (i.e. it is publicly available on the internet for anyone to see)

Are there any other comments you would like to make about sharing data?

21. When you use these methods of recording information, does it help you work collaboratively with others?

- Yes
- No

Please explain why

22. When you use this method of recording information, can you go back and change or update your records?

- Yes
- No

Cross-tenure Weed Data Collection and Sharing

23. As a land manager or volunteer, what is your main source of frustration with the collection of data and mapping of weed species in your region?

24. To what extent do these frustrations affect your ability to manage weeds effectively?

- Low - Current systems are adequate
- Medium - It could be better but it is not my biggest concern with weed management
- High - It is a major barrier that stops us from doing work
- I don't know

25. Would you be happy to share the information you collect about weed species so that different land managers could work together?

- Yes
- No, if so please tell us why e.g. privacy concerns, organisational policies

26. Do you know any land managers in your region that work collaboratively to manage weeds?

Think about private landholders, linear reserve managers, government agencies, community groups

- No
- Yes, please tell us about it including the types of land managers involved, location, the issue, purpose of sharing the data and outcome achieved.

* 27. Would you be interested in attending a forum about how information could be best recorded and shared so that land managers can work together to manage Serrated Tussock, Gorse and Blackberries?

- Yes
- No

Cross-tenure Weed Data Collection and Sharing

28. Where is your usual work location?

We will conduct the workshops at locations that are convenient for the majority of stakeholders. Additionally, an online option will be available for those who can't make it.

29. What topics would you want discussed further at the forum?

30. Please enter your email address so we can send you an invite to the forum. Please note, this information will be retained by RMCG only and not shared with anyone.

Email address

Cross-tenure Weed Data Collection and Sharing

31. Are there any other comments you would like to make?

32. If you would like a copy of the executive summary from the report, please add your email address below.

Cross-tenure Weed Data Collection and Sharing

Thank you

The success of this survey will hinge on the diversity of participants. If you would kindly forward this survey give to people you know who work in invasive weed management in Victoria, this will be a great help.

If you would like to know more about the three Community Pest Management Groups working together on this project, head to:

Victorian Serrated Tussock Working Party website: <https://serratedtussock.com/>

Victorian Gorse Taskforce website: <https://vicgorsetaskforce.com.au/>

Victorian Blackberry Taskforce website: <https://vicblackberrytaskforce.com.au/>

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