Protecting Victoria's Environment – Biodiversity 2037

In Victoria, DEECA is responsible for the programs that support Biodiversity 2037 ('Bio2037')

The **Programs and Partnerships Branch** manages the following programs:

- Protecting Biodiversity (PB)
- Weeds and Pests on Public Land (WPPL)
- Peri-urban Weed Management Partnerships (PWMP)
- Deer Control Program (DCP)
- Nature Fund
- Icon Species
- Faunal Emblems Program (FEP)

- Biodiversity Flood Recovery (BFR)
- Environmental Volunteering
- Victorian Landcare Program
- Port Phillip Bay Fund (PPBF)
- TO Caring for Country (CfC)
- Wildlife Rehabilitator Grants (WRG)
- BushBank

Most of these programs are required to report on-ground activities that support Bio2037 biodiversity protection

For most of these programs, the individual projects undertake work on the ground (**activity**). **Activity data** is recorded and analysed to ensure that on-ground work is contributing to the targets set in Bio2037.

All activity contributes to Bio2037 targets. In simple terms, the on-ground work can be separated into 2 categories

Category 1: Contributing To Target areas (CTT)

Generally, these are areas of specific control activity or habitat regeneration, and include:

- Feral animal control (Deer, Pig, Rabbit, Fox, Cat, and others)
- Invasive weed control (various weed species)
- Revegetation of native plant species

These actions can be reported as areas (in Hectares)

Category 2: Threatened Species Actions (TSA)

These are actions undertaken in the field at various sites, for specific species, and may include:

- Relocation of species to a new location
- Installation of artificial nesting hollows
- Community engagement events or construction of new signage

These actions are generally reported as numbers (not hectares), relating to (a) actions and (b) sites / locations

How is the activity data reported?

With most projects, there are targets specified in the Project Plan that need to be met for the project to be acquitted.

- For CTT-based projects, this is the area in hectares
- For TSA-based projects, this is the number of actions

To fulfil the two processes of (a) Acquittal and (b) Bio2037 Reporting, DEECA needs to be supplied with **spatial data files** of these activities, so that we can ensure that the activity proposed in the Project Plan matches what was actually done in the field.

Preferred method of reporting:

This is done via the 'spatial reporting' mechanisms DEECA has set up to capture data for Bio2037

The system developed is designed for projects to submit the spatial data that is used to

- acquit projects; and
- be included in Bio2037 reporting

Where is the Activity Reporting documentation?

All the relevant information for spatial data supply to DEECA can be found on the web site, here:

www.environment.vic.gov.au/biodiversity/activity-data

[Google search string: **DEECA activity reporting**]

Contributing Biodiversity Activity Data

Organisations provide biodiversity management activity data to DELWP as part of a DELWP funding/program agreement obligation or by voluntary contribution. Activity data provided by organisations/programs is used to determine progress in achieving the <u>Biodiversity 2037 Plan</u> contributing targets reported bi-annually and in the five-yeary <u>State of the Environment Report</u> <u>Pl. This data also informs and verifles models used to determine the best places to take cost-effective actions.</u>

When activity data reporting is a requirement under a DELWP funding agreement, the project investor/program lead will specify reporting requirements for that project.

Organisations/programs not under DELWP funding or program agreements can volunteer to provide activity data if they would like their activities to contribute to <u>Biodiversity 2037</u>.

Providing biodiversity activity data voluntarily to DELWP is most suitable for medium to large organisations who can support their delivery partners in accurately recording their projects and activities.

in enther case, data can be submitted by using DELWF biodiversity information systems (ActivityKit and STAR) or by providing shapeflies that meet the <u>Biodiversity 2037 activity</u> data requirements. An ESRI geodatabase format consistent with the DELWP Output data standard can be used by second or the provided by the standard can be used by second or the provided by the standard can be used by the standard can be used by

Reported activities must meet delivery standards described in agreements. DELWP's <u>Output Delivery standards</u> and are the minimum standard where not specified in an agreement. Delivery standards and guidance, as they relate to Bladiversity 2037, will be updated over time. An initial development is the <u>Re-vegetation Plant Provenance Information Sheet</u> that describes how to consider the changing climate when selecting stock for planting.



Shiny Daisy-Bush planting and monitoring. Credit: DELWP

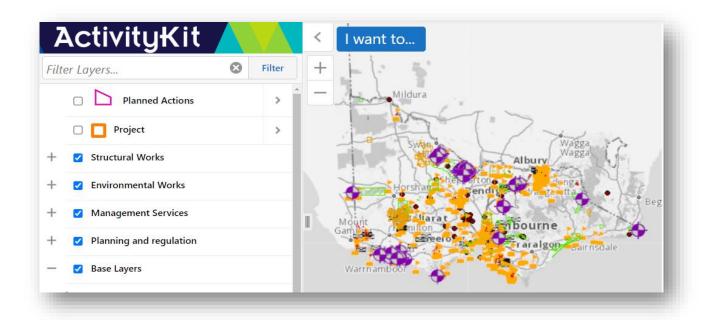
Link to the
"Biodiversity 2037 activity data requirements"
document

Protecting Victoria's Environment - Biodiversity 2037 Biodiversity 2037 Activity data requirements v1.0 Many Victorians contribute to biodiversity protection and enhancement. To account for these contributions and measure progress against Biodiversity 2037 these activities are mapped along with key activity information. The Biodiversity 2037 activity data tables contain the fields and values important for understanding activities delivered for biodiversity benefit. The activity data tables cover project and activity management information; who is involved in delivery; activity delivery details such as standards of delivery, timing, and frequency Attribute description Common attributes Description of attributes (fields) that apply to all or most of Fields and values that apply to each activity below. the Activity tables Animal control Partnership Pest animal or overabundant exotic or native wildlife Fields and values about formal partnerships develope management Assessments for information gathering that may or may not Plans developed to guide management. lead to management actions. Campaign Large scale, active and organised behaviour change activities. Programs delivered for biodiversity benefit Earth works Publication Earthworks for environmental management Key print and electronic communications materia **Ecological thinning** Research and monitoring Thinning to improve structure / composition of native Research and monitoring to fill knowledge gaps vegetation. Engagement event Revegetation and restoration Events for engaging communities Revegetating or restoring (often cleared) land, and marine and coastal environments Erosion control Rubbish removal Fields and values about rubbish removal activitie Seed funding Construction and maintenance of fences Funding initiatives for establishing development programs Terrestrial structure Fields and values about the use of fire Structures installed and maintained on land Grazing management Threatened species response Changes to grazing management practice: Actions taken to manage threatened specie Habitat feature Artificially creating habitat for native animals Management agreement Waterway structure Agreements for the conservation of land and/or biodiversity. Structures installed and maintained in waterway Marine structure Weed Control Weeds, overabundant or out of range native plan Wildlife emergency response Structures and locations for monitoring and surveillance. Actions taken in response to wildlife emergencie

Use of ActivityKit for DEECA spatial reporting

For organisations with limited GIS capability, DEECA does provide an online mapping system to input activity data: **ActivityKit**

HOWEVER: ActivityKit is <u>not</u> the preferred option for supply of Bio2037-compliant spatial data, as the system does not yet include all the Bio2037 attributes



What needs to be reported?

For Bio2037 targets, the following activities need to be reported

Animal control	<u>Partnership</u>
Pest animal or overabundant exotic or native wildlife management.	Fields and values about formal partnerships developed.
Assessment	<u>Plan</u>
Assessments for information gathering that may or may not lead to management actions.	Plans developed to guide management.
Campaign	<u>Program</u>
Large scale, active and organised behaviour change activities.	Programs delivered for biodiversity benefit.
Earth works	<u>Publication</u>
Earthworks for environmental management.	Key print and electronic communications materials.
Ecological thinning	Research and monitoring
Thinning to improve structure / composition of native vegetation.	Research and monitoring to fill knowledge gaps.
Engagement event	Revegetation and restoration
Events for engaging communities.	Revegetating or restoring (often cleared) land, and marine and coastal environments.

Erosion control	Rubbish removal
Fields and values about activities to control erosion.	Fields and values about rubbish removal activities.
<u>Fence</u>	Seed funding
Construction and maintenance of fences.	Funding initiatives for establishing development programs.
<u>Fire</u>	<u>Terrestrial structure</u>
Fields and values about the use of fire.	Structures installed and maintained on land.
Grazing management	<u>Threatened species response</u>
Changes to grazing management practices.	Actions taken to manage threatened species.
Habitat feature	<u>Water</u>
Artificially creating habitat for native animals.	Environmental or cultural water management.
Management agreement	Waterway structure
Agreements for the conservation of land and/or biodiversity.	Structures installed and maintained in waterways.
Marine structure	Weed Control
Structures installed and maintained in marine environments.	Weeds, overabundant or out of range native plant management.
Monitoring structure	Wildlife emergency response
Structures and locations for monitoring and surveillance.	Actions taken in response to wildlife emergencies.

What data is required?

For each activity, the data needs to have firstly a set of *common details*...

Reporting standard name and version	Year activity delivered	Fund Source	Project Id	Delivery agent	Delivery agent name	Planned management outcome	Environment

...and secondly – depending on the activity – a set of *activity-specific details*

(nectares) name the work/delivery) name number nours		Title	Purpose	Туре	Treatment area (hectares)	Species	Species common name	No. of individuals	On ground works agent (Agent doing the work/delivery)	•	Total volunteer number	Total volunteer hours
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These details are included in the spatial data as <u>data attributes</u>

Attribute lists are included in the "Biodiversity 2037 activity data requirements" document

How do projects ensure they are submitting correct data?

We need 'standardised' spatial data for all activities.

DEECA's spatial platform is **ArcGIS**, and so the data format required is:

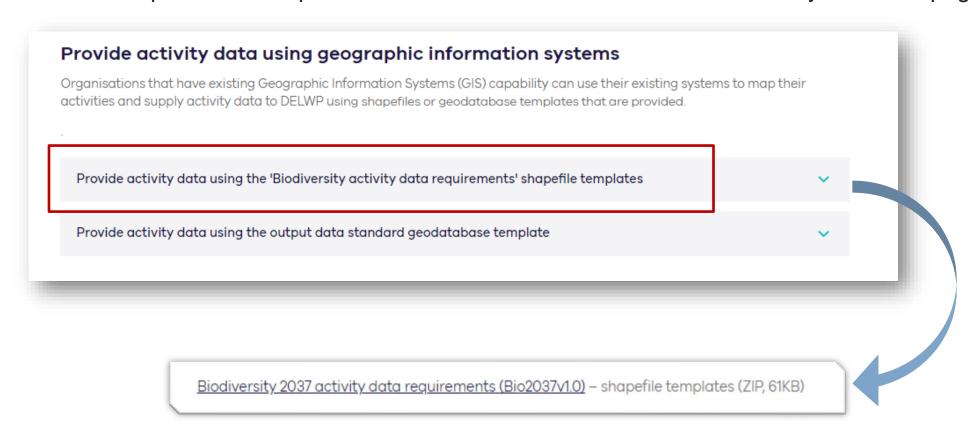
Shapefile

There are 3 forms of spatial data that can be included:

- Polygons (areas of activity, such as weed & pest animal control or revegetation)
- Lines (lineal boundaries, such as predator exclusion fences)
- Points (sites of activity, such as points of species re-location)
- ✓ DEECA has developed a 'template' data file for the Shapefile data
- ✓ The template files are pre-populated with all the attribute fields required for Bio2037 reporting

Where are the spatial data templates?

The spatial data templates for Shapefiles can be found on the same DEECA activity data web page:

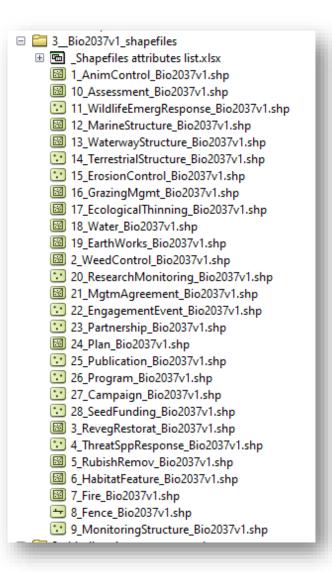


What files are in the templates?

Templates are supplied as a ZIP file.

The data in the spatial templates includes separate files for each activity.

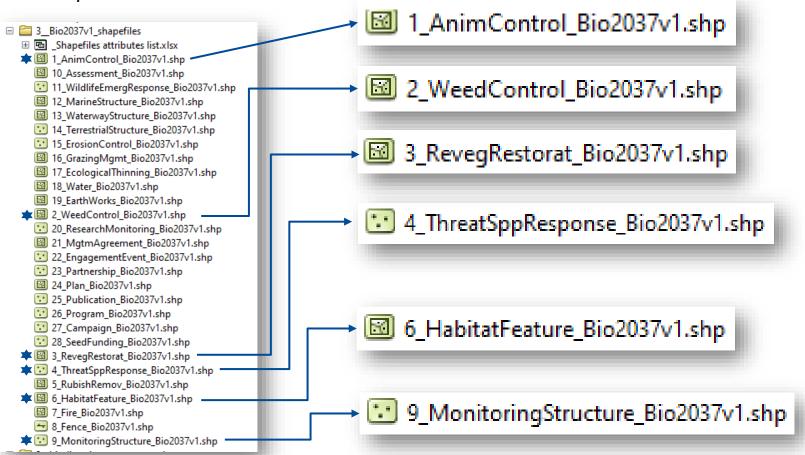
So the shapefile template ZIP file will contain each of these...



Which template do I use for different activities?

Different Shapefile templates should be used for different activities.





Pest animal control (areas in hectares)

Invasive weed control (areas in hectares)

Revegetation (areas in hectares)

Threatened species actions:

Species reintroduction; translocation; Propagation; Genetic interventions

Man-made features:

Artificial tree hollow; Bat box; Logs; Artificial reef

Monitoring structures:

Camera trap; Song meter; Flow meter

Typical activities that need to be reported

In any year, there are a number of specific activities that get submitted to DEECA. As an example, in the 2023-24 year's reporting, these activities included:

Animal control

Assessment

Earthworks

Ecological thinning

Engagement event

Fence

Fire

Habitat feature

Management agreement

Management plan

Monitoring structure

Partnership

Plan

Publication

Research and monitoring

Revegetation and restoration

Terrestrial structure

Threatened species response

Water

Waterway structure

Weed control

Quick review of GIS workflow

Spatial Data

Activity data is created either in the field during on-ground work, or from existing data sources



Instructions on how to create GIS data for funding application project areas

Create DEECA required standard 'Shapefile' GIS data for project areas

For some types of activity data not gathered in the field, instructions on how to create a Shapefile can be found on the DEECA web site

Instructions on how to create GIS data

← Click link

Quick review of GIS workflow

GIS software

GIS software of some type needs to be used to create the Bio2037-compliant activity spatial data There are a number of different GIS software systems available, ranging from fairly expensive to free



Desktop Enterprise Expensive



QGIS

Desktop Open-source Free



MapInfo Pro

Desktop Enterprise Expensive



Maptitude

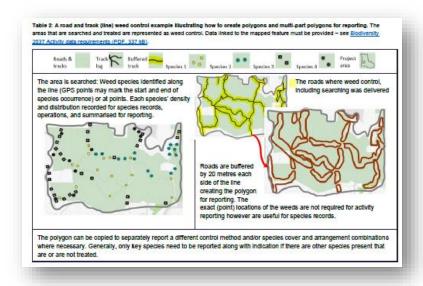
Desktop Online Under \$1k

Of these, ArcGIS Pro and QGIS are the most widely used, with QGIS the best value

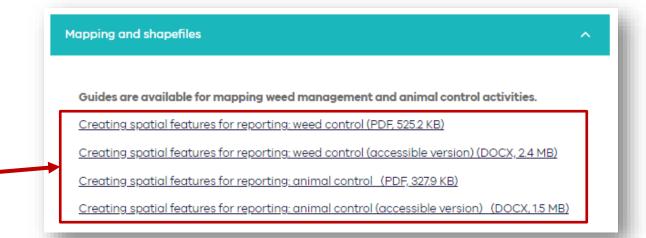
Quick review of GIS workflow

Weed and Animal Control data

For Weed Control and Animal Control activity, spatial data is prepared using the guidelines set out in these documents (on web site)

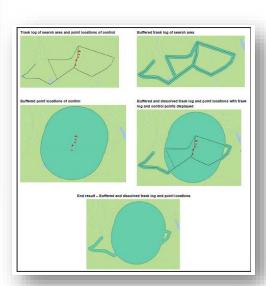


Weed Control guidelines



Species	Trap – Shoot – Remove Buffer point	Bait station Buffer point	
Over abundant marine wildlife or pests	200 metres	n/a	
Overabundant native herbivores (terrestrial)	500 metres	n/a	
Fox	1 kilometre	1 kilometre	
Feral cat	1 kilometre	1 kilometre	
Goat	1 kilometre	n/a	
Deer	2 kilometres	n/a	
Pig	5 kilometres	5 kilometres	
Feral cattle	5 kilometres	n/a	
Feral horse	5 Kilometres	n/a	
Rabbit	See Table 2		

Animal Control guidelines



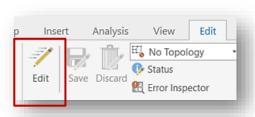
Quick review of GIS workflow

Adding data to Bio2037 template file (ArcGIS Pro)

Copy / Paste the Bio2037 empty template file into your data folder Rename it as follows:

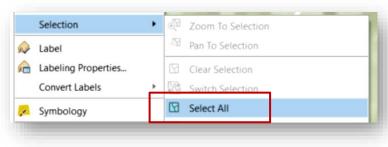
OPPXXXX_ProjectDescription_Bio2037_2324.shp

Load (1) activity data layer data file and (2)

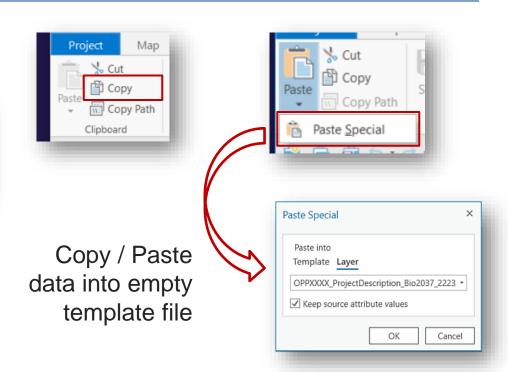


empty template file

Edit mode



'Select all'

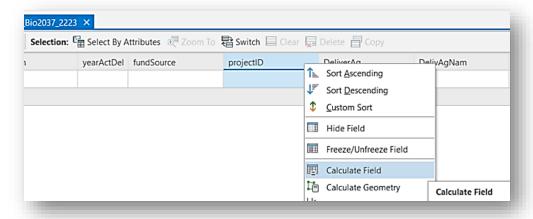


EXAMPLE: Weed Control

2 WeedControl Bio2037v1.shp

Quick review of GIS workflow

Adding data to Bio2037 template file (ArcGIS Pro)

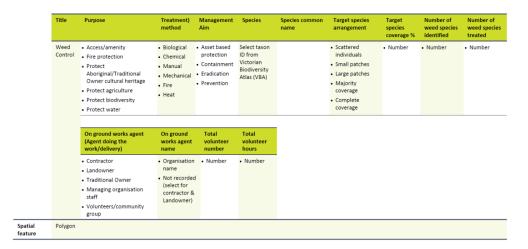




In the attribute table, either add data manually or use Field Calculator to add attributes to multiple polygons

For valid attributes, check the Bio2037 guidelines

EXAMPLE: Weed Control



Quick review of GIS workflow

Adding data to Bio2037 template file (QGIS)

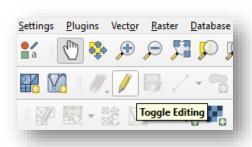
Copy / Paste the Bio2037 empty template file into your data folder Rename it as follows:

OPPXXXX_ProjectDescription_Bio2037_2324.shp

EXAMPLE: Weed Control

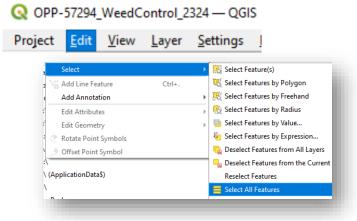
2_WeedControl_Bio2037v1.shp

Load (1) activity data file and (2) empty template file



Edit mode

Highlight the activity data layer From the top 'Edit' menu

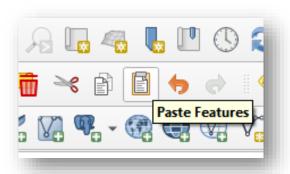


'Select All Features'



Copy features

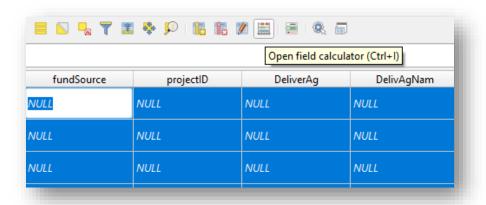
Highlight the empty template layer

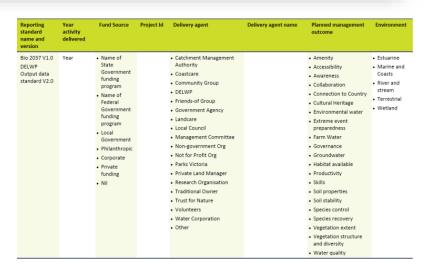


Paste features into empty template data layer

Quick review of GIS workflow

Adding data to Bio2037 template file (QGIS)





In the attribute table, either add data manually or use Field Calculator to add attributes to multiple polygons

For valid attributes, check the Bio2037 guidelines

EXAMPLE: Weed Control

tle	Purpose	Treatment) method	Management Aim	Species	Species common name	Target species arrangement	Target species coverage %	Number of weed species identified	Number of weed spe treated
Veed Control	Access/amenity Fire protection Protect Aboriginal/Traditional Owner cultural heritage Protect agriculture Protect biodiversity Protect water	Chemical Manual Mechanical	Asset based protection Containment Eradication Prevention	Select taxon ID from Victorian Biodiversity Atlas (VBA)		Scattered individuals Small patches Large patches Majority coverage Complete coverage	• Number	• Number	Number
	On ground works agent (Agent doing the work/delivery)	On ground works agent name	Total volunteer number	Total volunteer hours					
	Contractor Landowner Traditional Owner Managing organisation staff Volunteers/community group	Organisation name Not recorded (select for contractor & Landowner)		• Number					
Polygon									

Saving and sending Shapefiles

When a Shapefile is saved, it contains some or all of these files

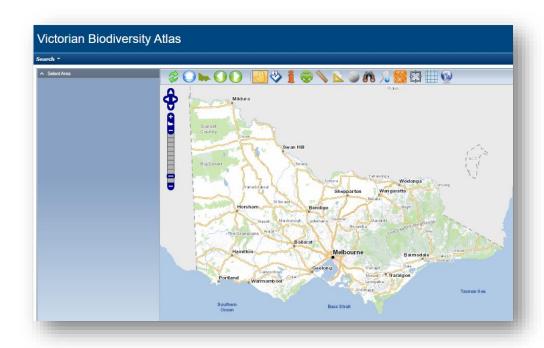
OPPXXXX_ProjectDescription_Bio2037_2223.cpg
OPPXXXX_ProjectDescription_Bio2037_2223.dbf
OPPXXXX_ProjectDescription_Bio2037_2223.prj
OPPXXXX_ProjectDescription_Bio2037_2223.sbn
OPPXXXX_ProjectDescription_Bio2037_2223.sbx
OPPXXXX_ProjectDescription_Bio2037_2223.shp
OPPXXXX_ProjectDescription_Bio2037_2223.shx

OPPXXXX_ProjectDescription_Bio2037_2223.zip

To send a Shapefile to someone else for them to use, all the files must be zipped up into a **.ZIP** file

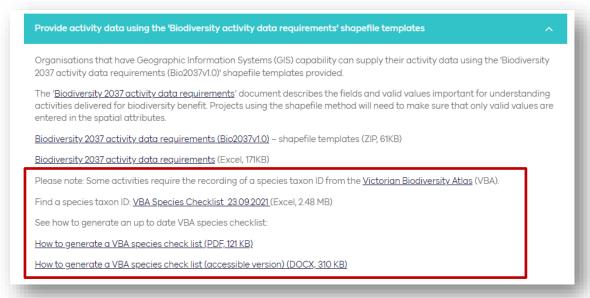
Additional data for Victorian Biodiversity Atlas (VBA)

An additional requirement for most projects is to submit data relating to observation of specific flora and fauna species, for inclusion in the Victorian Biodiversity Atlas (VBA)





Instructions on how to do this are included on the next page, and also on the DEECA activity data web page, under the sections relating to Shapefile and Geodatabase file templates



Adding species data to the Victorian Biodiversity Atlas (VBA)

VBA species observations show where wildlife is now and how this has changed over time. Species data feed into many of DEECA's biodiversity tools used for everyday decision making.

VBA is used in conservation status assessments, Habitat Distribution Models (HDMs) that feed into the <u>Strategic Management Prospects</u> and <u>Native Vegetation Removal Regulations</u>, and into our public land management, research activities and State of the Environment reporting. It will also be the main source of information to show how species are recovering post fire.

Recording species observations in VBA is a project requirement and is part of your reporting. You **must attach a species list generated from your VBA project** when providing your final report. This enables acquittal of the VBA component of your reporting.

Instructions for using VBA

Contribution of data to the VBA is open to all at: https://vba.biodiversity.vic.gov.au/vba/#/

First time users need to sign up as a contributor ('Sign Up' button) and complete the form. Registration approval is immediate for VicGov staff but may take a couple of days for other organisations. Once approved you will be able to add records to the VBA. Information and guides on the data standard and how to use the VBA can be accessed on the <u>VBA web page</u>.

To assist reporting there is a specific project created to capture translocation of species (VBA Project ID 5838) - please use this for any translocation activities. Specific details of how to record the movement of individuals are provided in the following document:

Translocation Guide for VBA (PDF)

For all other survey work please create a VBA project (see guidance documents below) specifically for your program's activities - the name should include the program name (eg 'FEP2023-25').

- How to create a project in the VBA (PDF, 358.1 KB)
- How to Add a survey and species records to a VBA Project

The VBA web page has many videos and guidance documents to help you use the VBA: https://www.environment.vic.gov.au/biodiversity/victorian-biodiversity-atlas/about-the-vba

The instructions above (and on the VBA web page) provide detailed guidance for sharing species observations with the VBA.

There are Excel templates for batch upload, which is recommended if you have 5 or more surveys to add. Please email vba.help@deeca.vic.gov.au for templates and help.

For any queries or issues please email: vba.help@deeca.vic.gov.au.

Contact

For further information regarding Bio2037 activity data reporting, contact

the **DEECA Program Lead** for the program