



DEPARTMENT OF PLANNING, INDUSTRY & ENVIRONMENT

BioNet System enhancements

Release notes

January 2020 (Release 3.2.3)



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Cover photo: Grove of grass trees on Bluff Mountain walking track, Warrumbungle National Park. Eveline Chan/DPIE.

Published by:

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ISBN 978-1-922318-05-3
EES 2019/0708
January 2020

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1. Background

BioNet is the repository of biodiversity data maintained by the Department of Planning, Industry and Environment and contains species sightings and systematic survey, vegetation classification and threatened biodiversity data collections used by a wide range of organisations. BioNet data are held across three separate website applications: BioNet Atlas; BioNet Vegetation Classification; BioNet Threatened Biodiversity.

The majority of the data maintained in these applications are also available via BioNet Web Services that are maintained in parallel to the applications.

The BioNet Enhancement Project (3.2) is underway to ensure BioNet is ready to accommodate a major upgrade of Eastern NSW Plant Community Type (PCTs) data. Data changes will be scheduled separate to and following the BioNet system changes. This will see PCTs transition to a more robust, quantitatively derived PCT classification that is derived from and systematically linked with full floristic survey plots. Enhancements are being deployed in four separate production releases between July 2019 and June 2020.

This Release Note (3.2.3) details the third and most significant production release of four planned releases. Earlier releases in this series include Release 3.2.1 (July 2019) and Release 3.2.2 (September 2019).

In total, 26 changes were implemented in this Release 3.2.3. These include enhancements to both the BioNet Vegetation Classification and BioNet Atlas applications in addition to several bug fixes.

2. Who is affected by the changes?

2.1 BioNet Atlas application

Within the BioNet Atlas application, access to the various modules varies based on User Role. These controls are in place to prevent inadvertent edits to data and protect details of sensitive information.

Eleven changes have been made to the BioNet Atlas application. Table 1 provides a summary of all modules and user roles relevant for each change. Each change is identified by a unique number that corresponds to the item number in this report. Refer to the 'Enhancement' section for specific details of each change.

Table 1 Overview of enhancements for each of the modules in the BioNet Atlas application by user role access level*

		User role						
		Public	Registered	Sensitive species Licence	Sensitive Species Licence + survey data entry rights	DPIE staff (Edit role)	DPIE staff (TB Profile Edit role)	DPIE staff (Admin)
Module	Search							
	Flora surveys		1, 2, 3, 4,5		1, 3, 4,5	1, 2 (for Classification user)	1, 2 (for Classification user)	1, 2 (for Classification user)

User role						
				role), 3, 4, 5	role), 3, 4, 5	role), 3, 4, 5
Import spreadsheet						
Codes						
Species						
Fauna surveys		5	5	5	5	
Species sightings						
Threatened Biodiversity	8	8	8	7,8,9	7, 8, 9	7, 8, 9
Admin						
Other – applies across multiple modules	10,11	10,11	10,11	10,11	10,11	10,11

*number refers to the Enhancement item number detailed in Section 4 of this document

2.2 BioNet Threatened Biodiversity application

There have been no changes.

2.3 BioNet Vegetation Classification applications

Within the BioNet Vegetation Classification Edit application, access varies based on User Role. These controls are in place to prevent inadvertent edits to data.

Fifteen changes have been made to the BioNet Vegetation Classification applications. Table 2 provides a summary of changes made in this Release, based on user role. Each change is identified by a unique number that corresponds to the item number in this report. Refer to the 'Enhancement' section for specific details of each change.

Table 2 Overview of enhancements to the BioNet Vegetation Classification applications by User Role access level*

User role					
Public application	Edit application – Read only	Edit application – TEC relationship Edit	Edit application – Statutory Data Edit	Edit application – Classification Edit	Edit application - Admin
12, 13, 17, 19, 21, 24, 25, 26	13, 16, 17, 18, 19, 21, 24, 25, 26	13, 14, 16, 17, 18, 19, 21, 24, 25, 26	13, 16, 17, 18, 21, 22, 23, 24, 25, 26	13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 24, 25, 26	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26

*number refers to the item number of Enhancement item number detailed in Section 4 this document.

3. New functionality

3.1 BioNet Atlas

There is no new functionality.

3.2 BioNet Threatened Biodiversity app

There is no new functionality.

3.3 BioNet Vegetation Classification

There is no new functionality.

4. Enhancements

4.1 BioNet Atlas

4.1.1 Flora surveys

1. New attributes in export files (Step 3)

Applies to: users with Registered user access, a Sensitive Species Data Licence or Department of Planning, Industry and Environment access who have appropriate dataset access.

A number of additional attributes have been added to export outputs from the BioNet Atlas – Data Analysis Module reflecting new integration between PCT classification and systematic flora plots, and the intersection of plots with modelled layers of environmental variables, including:

- At step 3 – Data Review: Select Columns and Export data buttons
 - PCT ID
 - PCT Name
 - PCT Assignment Category
 - Rainfall
 - Temperature
 - Elevation.

2. New attributes in export files (Step 5)

Applies to: users with Classification role.

A number of additional attributes have been added to export outputs from the BioNet Atlas – Data Analysis Module reflecting new integration between PCT classification and systematic flora plots, and the intersection of plots with modelled layers of environmental variables, including:

- At step 5 – Taxonomic Review: Export Taxon Data button – no new attributes but modified so that SpeciesFrequency is a value between 1 and 100. Previously, due to the algorithm used, SpeciesFrequency was a value between 0 and 100. The value 0 caused problems.
- At step 5 – Taxonomic Review: Export Domain Data button
 - minimumElevationInMeters
 - medianElevationInMeters
 - maximumElevationInMeters
 - minimumAnnualRainfallInMillimeters
 - medianAnnualRainfallInMillimeters
 - maximumAnnualRainfallInMillimeters
 - minimumAnnualTemperatureInCelsius
 - medianAnnualTemperatureInCelsius
 - maximumAnnualTemperatureInCelsius.

3. New taxonomic assignment method

Applies to: users with Registered user access, a Sensitive Species Data Licence or Department of Planning, Industry and Environment access who have appropriate dataset access.

Taxonomic assignment allows users to determine how taxonomic details are displayed, such as either using the most current taxonomic assignment in the BioNet Atlas database, as the species were originally entered into the database, or grouped by subspecies, variety and other infraspecific taxa to species level. A new taxonomic assignment method has been implemented at Step 3 of the Data Analysis Module including 'PCT classification taxonomic mapping' as an additional option to allow users to apply the same taxonomic assignment to their analysis set as is used in the Eastern NSW PCT Classification data set.

Selection of taxonomic assignment method has been changed from a series of three radio buttons to a dropdown box of four entries.

4. New export format

Applies to: users with Registered user access, a Sensitive Species Data Licence or Department access who have appropriate dataset access.

A new export format has been implemented at Step 6 of the Data Analysis module. The 'Plot to PCT assignment tool' format will enable users to extract their analysis set in a format ready for upload to the Plot to PCT assignment tool. This tool is designed to help users identify Plant Community Types (PCTs) using standard flora survey methods including those required under the NSW Biodiversity Assessment Method (BAM) and promoted by the NSW Vegetation Survey Standards. The Plot to PCT assignment tool will be available as a new and separate application when it is released at a later date.

In order to streamline this new use, the Plot to PCT Assignment Tool format has been set as the default Output format. The Default option for Include Exotic Species has been changed from Yes to No. The Default for Exclude Genus Only records has been changed from Off to On and the Default Data transformation has been changed from Blank (i.e. untransformed) to Cover 1 to 6 as this is the transformation recommended to ensure that cover data are treated consistently. The transformation to Cover 1 to 6 will not only deal with legacy Cover Score systems, but also directly transforms data recorded as % Cover actual and Abundance actual values.

5. Replicate graphics tab now displaying

Applies to: users with Registered user access, a Sensitive Species Data Licence or Department access who have appropriate dataset access.

Following Release 3.2.3, a bug was preventing the graphics tab from displaying. The function now works as expected allowing users to view the graphics tab and upload photos.

4.1.2 Fauna surveys

6. Census record as Scat now functional

Applies to: users with a Sensitive Species Data Licence or Department access who have appropriate dataset access.

A bug preventing a user from creating a census record of 'scat' type has been resolved. The function now works as expected.

4.1.3 Threatened biodiversity

7. Ability to delete Plant Community Type (PCT) – Threatened Ecological Community (TEC) associations has been removed

Applies to: users with Admin and TB Profile Edit access (Department of Planning, Industry and Environment).

The ability to delete associations between PCT and TEC has always been managed solely in the BioNet Vegetation Classification Edit database, however, this functionality was duplicated in the BioNet Atlas Threatened biodiversity module. The ability to delete the associations in the Threatened Biodiversity module has been removed, ensuring that the BioNet Vegetation Classification Edit database is now the sole source for these edits.

8. PCT Name changes

Applies to: users Registered, Sensitive Species Licence, or Department access.

To provide greater clarity and consistency of terminology used, 'PCT Name' related fields have been revised across all BioNet applications (import/export templates). Changes include:

- 'PCT Common Name' and 'Common Community Name' labels are now referred to as 'PCT Name'.
- 'PCT Common Usage Name' has been retired. This field was largely unpopulated. Where populated, these data have been moved to the PCT Name field.

9. Editing Species Distribution with No Geographic Restriction (via Spatial Viewer)

Applies to: users with Admin and TB Profile Edit access (Department of Planning, Industry and Environment).

To address the misalignment between the Geographic Distribution attribute value used in the BioNet Atlas database and the value expected in the BAM calculator, the application was modified to store NULL values in the database when users edit the spatial distribution of a species and indicate that there is no geographic restriction within an IBRA (Interim Biogeographic Regionalisation for Australia). Users will not notice any change to the functionality of the application.

4.1.4 Multiple modules

10. Branding, legislation and organisational reference changes

Applies to: All users.

The branding, legislation and organisations referred to throughout the BioNet applications (including downloadable code sheets and species lists) have been updated to align with new legislation, state government structures and remove reference to previous legislation, structures and organisations.

11. Security issues

Applies to: All users.

A number of minor technical security issues (ciphers supported, session cookie management) have been resolved. Users will not notice any functional changes in the application.

4.2 BioNet Threatened Biodiversity application

There have been no changes.

4.3 BioNet Vegetation Classification

4.3.1 Multiple changes

12. Login screen changes

Applies to: Vegetation Classification Public.

A number of changes have been made to the login screen to provide a clearer explanation of the login functionality to users. These changes include:

- Expanded explanatory text highlighting username/password requirements and system compatibility.
- Error message on incorrect username password combination.

13. PCT and community search screen

Applies to: Vegetation Classification Edit and Public.

When the user performs a search using either the PCT search or community search feature, the user can select/view a PCT from the search listing without losing the search results. The selected PCT will open in a new separate tab while maintaining the search results. Users will only be able to open a single PCT tab from the search results to prevent multiple PCT tabs being opened at the same time.

14. New attributes in Import files

Applies to: Vegetation Classification Edit.

Import processes have been revised to enable upload/import of several new attributes exported from BioNet Atlas and to enable some data generated outside Atlas to be imported to Vegetation Classification. All fields uploaded/imported are now displayed in the user interface to enable users to review and edit uploaded data. These new fields are also displayed in the PCT user interface in both the Edit and Public applications. New fields able to be uploaded/imported include:

- Core template: PCT classification type.
- Replicate template: PCT assignment category.
- Taxon template: taxa without a defined growth form group are now able to be uploaded.
- Domain template: minimum/median/maximum rainfall, temperature and elevation values, median native species richness; profile source and reference code; vegetation description; classification confidence level; IBRA version; PCT scientific name.
- TEC template: PCT ID; TEC Act; TEC name; TEC fit status; TEC comments; TEC association.

15. Modifications for quantitative PCTs

Applies to: Vegetation Classification Edit and Public.

With the definition of quantitative classification type PCTs and upload of associated data to BioNet Vegetation Classification, the behaviour of some UI (User Interface) features has

been restricted so that the data for quantitative PCTs can only be edited via upload/import processes to maintain alignment with BioNet Atlas. This includes:

- Ability to modify PCT distribution information.
- Ability to add/remove replicates from a PCT.

16. Automated PCT definition status management

Applies to: Vegetation Classification Edit.

Changes have been implemented to automate definition status changes when PCTs are edited, including:

- PCT Definition Status is automatically set when a new PCT is created through upload.
- PCT Definition Status is automatically modified when an existing PCT is edited through upload.

17. New interface features for assignment category

Applies to: Vegetation Classification Edit and Public.

With the definition of quantitative PCTs and upload of associated data to Vegetation Classification, several new features will become active. These include:

- Display of PCT assignment category of a replicate in the Plot data section in the Spatial Information tab.
- Display of the number of primary and secondary replicates associated with a quantitative PCT in the Plot data section in the Spatial Information tab.
- Display of Species by Growth Form Group section in the Scientific Description tab, displaying the median native species richness of the PCT, and the median cover score and frequency of species in the PCT. Users are now able to filter the Species by Growth Form Group table using available fields.
- Display of minimum, maximum and median annual mean temperature, together with values for annual rainfall and elevation, in the Climate, Landform and Substrate section in the Distribution Information tab.

18. Benchmark maintenance (Benchmarks Management)

Applies to: Vegetation Classification Edit.

New features have been implemented to support the maintenance of PCT benchmarks including:

- Status of new variations is now automatically set at 'Draft' for PCT-level benchmarks and 'Draft-default' for Class/IBRA-level benchmarks.
- Default Class/IBRA benchmarks are automatically applied when Vegetation Class for a PCT is modified (including for changes to a PCT by upload/import processes).
- Class/IBRA benchmarks are automatically unassigned when PCT-level benchmarks are set for a PCT.
- An export report of the default Class/IBRA benchmarks from the Manage Benchmarks Default Data page.
- Benchmark source type is now referred to as Benchmark Calculation Level.
- Decommissioning a PCT will now decommission all (Class/IBRA and PCT) benchmarks for that PCT.

- New benchmarks are now prevented from being allocated to a PCT with Decommissioned status.

19. Negative TEC associations (PCT Edit/View)

Applies to: Vegetation Classification Edit and Public.

TEC Relationship Edit users and Classification Edit users are now able to define when a PCT is not associated with any TEC where previously they were only able to indicate positive relationships. These users are also able to manually update the TEC status date to indicate that they have reviewed the TEC associations.

20. PCT lineage maintenance (Plant Community Lineage Management)

Applies to: Vegetation Classification Edit.

Several changes have been made to the PCT lineage management features including:

- Resolution of a bug which prevented correct validation of lineage change reason. This bug has been resolved and lineage upload now functions correctly.
- Relevant users are also now able to delete records in the lineage edit screen.
- Removal of feature to automatically create a duplicate inverse lineage record for each record.

21. Clearing data management and calculations (PCT Clearing)

Applies to: Vegetation Classification Edit and Public (though note, only Approved and Decommissioned PCTs are visible in Public).

Several changes have been made to the PCT Clearing features including:

- PCT Clearing status will be automatically set to decommissioned when a PCT is decommissioned.
- When uploaded, PCT Clearing data will have an 'undefined' status for a new PCT, and status will be unchanged for an existing with PCT with % cleared data.
- A confirmation message is presented to the user when changes are made to the extent values or directly to the % cleared value.

22. NSW Landscapes (NSW Landscapes)

Applies to: Vegetation Classification Edit.

The NSW Landscapes module previously had a bug in area calculations which prevented the user from saving when no changes had been made to the record giving an 'invalid total area of NSW landscape' message. This bug has been resolved and the validation on save now functions correctly.

23. System reports (System Reports)

Applies to: Vegetation Classification Edit.

The system report generation feature has previously had a bug which prevented definition of search criteria for reports. This bug has been resolved and the system reporting feature now functions correctly.

24. PCT Name changes

Applies to: Vegetation Classification Edit and Public.

PCT name related fields have been revised across all BioNet applications (including import/export templates). Note: some fields in search functions have not been updated in this release.

- PCT Common Name and Common Community Name labels are now referred to as PCT Name.
- PCT Scientific Name labels remain largely unchanged but in some areas of the application Scientific Community Name label has been revised to PCT Scientific Name. The data in PCT Scientific Name has been revised and now contains the data previously held in PCT Name.
- PCT Common Usage Name has been retired. This field was largely unpopulated. Where populated, these data have been moved to the PCT Name field.

25. Branding changes – logo and references to previous legislation and organisational structures

Applies to: Vegetation Classification Edit and Public.

The branding, legislation and organisations referred to throughout the BioNet applications (including downloadable code sheets and species lists) have been updated to align with new legislation, state government structures and remove reference to previous legislation, structures and organisations.

26. Security issues

Applies to: Vegetation Classification Edit and Public.

Several minor technical security issues (ciphers supported, session cookie management) have been resolved. Users will not notice any functional changes in the application.