



# Release notes

BioNet Web Services 3.0

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Published by:

Office of Environment and Heritage

59 Goulburn Street, Sydney NSW 2000

PO Box A290, Sydney South NSW 1232

Phone: +61 2 9995 5000 (switchboard)

Phone: 131 555 (environment information and publications requests)

Phone: 1300 361 967 (national parks, general environmental enquiries, and publications requests)

Fax: +61 2 9995 5999

TTY users: phone 133 677, then ask for 131 555

Speak and listen users: phone 1300 555 727, then ask for 131 555

Email: [info@environment.nsw.gov.au](mailto:info@environment.nsw.gov.au)

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# 1 Background

The BioNet Web Services initiative is a program of work conducted by the New South Wales Office of Environment and Heritage (OEH). It will progressively make the data held in BioNet open and available to developers via open application programming interfaces (APIs). BioNet is the repository of biodiversity data maintained by OEH, and contains species sightings and systematic survey, vegetation classification and threatened biodiversity data used by a wide range of organisations.

BioNet Web Services enable organisations and individuals to directly integrate biodiversity data into their software systems and unlock the innovation potential of this valuable community-owned data asset. By delivering these data via open APIs, we are aiming to improve environmental decision-making by integrating up-to-date, consistent and reliable biodiversity data into planning and assessment systems.

This release adds data about threatened biodiversity, including species, ecological community and population profiles, as well as the species taxonomy used across BioNet, and a thesaurus service for app developers. In addition, a major revision of the Vegetation Classification web service has been undertaken to add benchmark data used in the Biodiversity Assessment Methodology and add growth form data for plant community types (PCTs) defined using the new quantitative methodology, as well as minor improvements to the Species Sightings web service.

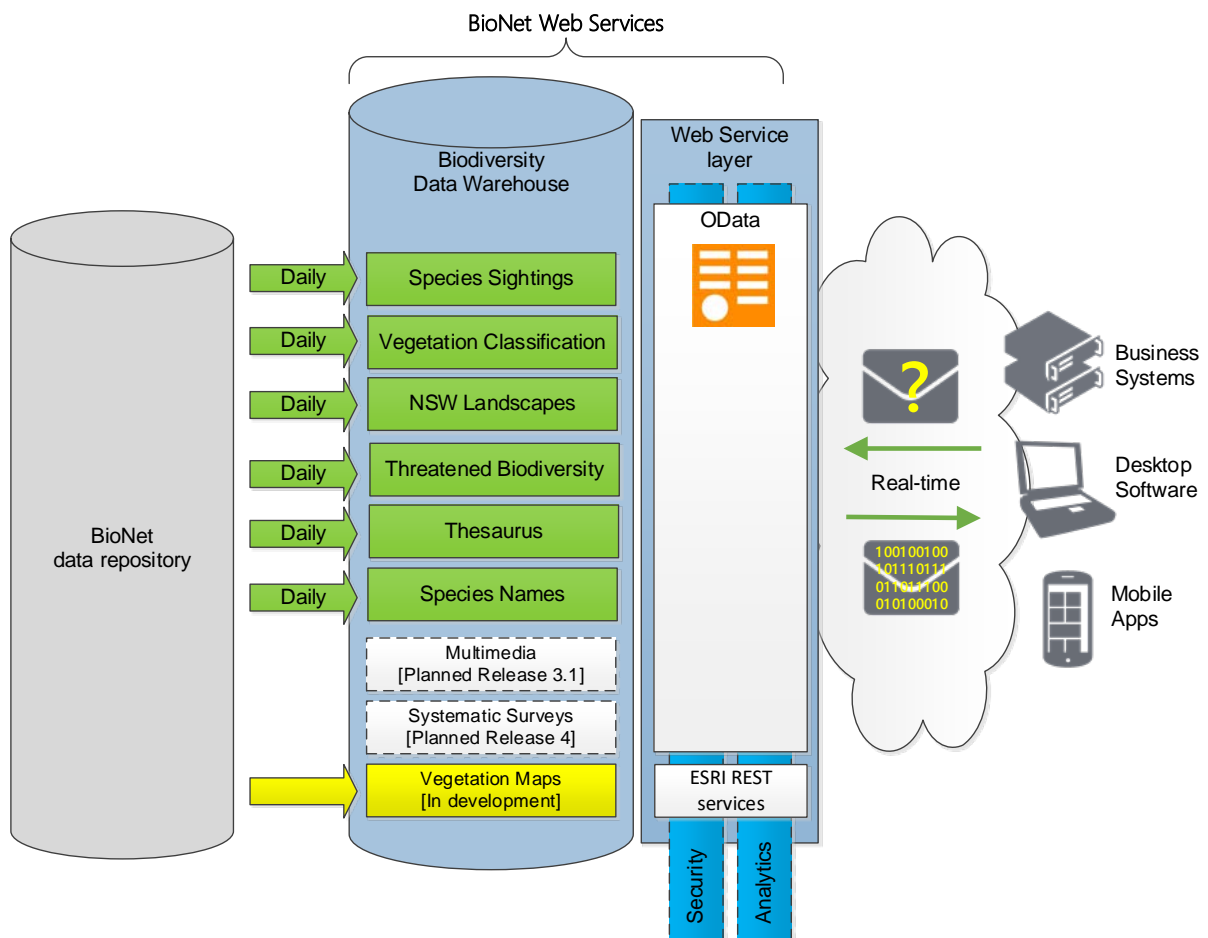
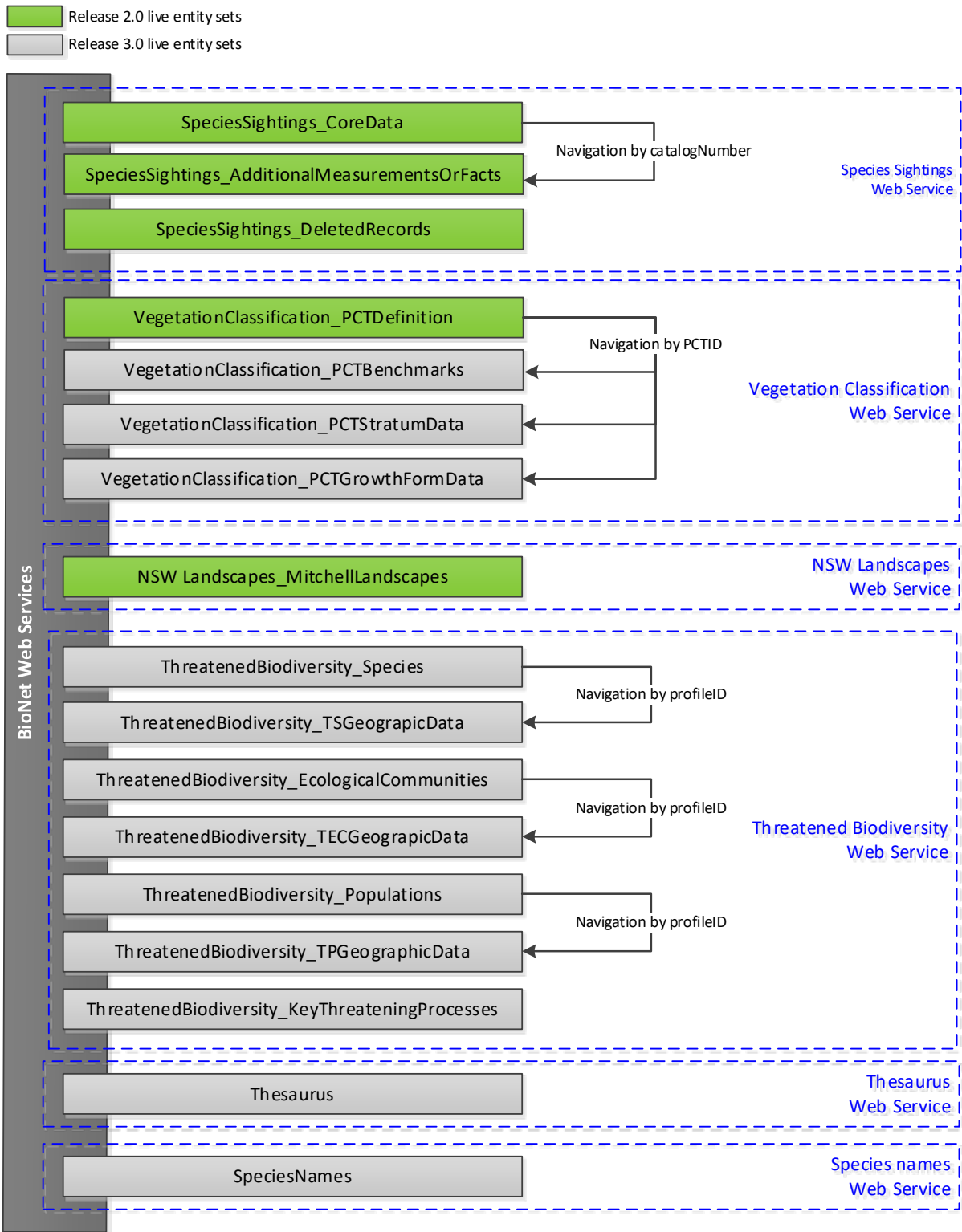


Figure 1 Overview of BioNet Web Services implementation



**Figure 2** Overview of the existing and new OData entity sets that comprise Release 3.0, including navigation links between entity sets

## 2 New features

### 2.1 Threatened Biodiversity

Data held in the Threatened Biodiversity Profiles data collection (previously named the threatened species profile database, or TSPD) have been added to the BioNet Web Services. These data are organised into 7 'entity sets' (data tables):

- **ThreatenedBiodiversity\_Species** provides profile information for all listed threatened species, including data used by the BAM Tool. Data include information on habitat, life history strategies, response to management actions, threats, survey requirements and the ability to withstand any further loss in numbers.
- **ThreatenedBiodiversity\_TSGeographicData** provides data on the occurrence of each threatened species by Interim Biogeographic Regionalisation for Australia (IBRA) Subregion.
- **ThreatenedBiodiversity\_EcologicalCommunities** provides profile information for all listed threatened ecological communities, including data used by the BAM Tool. Data include information on ecology, response to management actions, threats, and ability to withstand any further loss in extent.
- **ThreatenedBiodiversity\_TECGeographicData** provides data on the occurrence of each threatened ecological community by IBRA Subregion.
- **ThreatenedBiodiversity\_Populations** provides profile information for all listed threatened populations, including data used by the BAM Tool. Data include information on habitat, life history strategies, response to management actions, threats, survey requirements and ability to withstand any further loss in numbers.
- **ThreatenedBiodiversity\_TPGeographicData** provides data on the occurrence of each threatened population by IBRA Subregion.
- **ThreatenedBiodiversity\_KeyThreateningProcesses** provides data on key threatening processes.

### 2.2 Species Names

Species Names provides the species taxonomy used by BioNet, including current and old scientific names, as well as the species legislative status, the growth form for plants and some generalised groupings of species for plain-English aggregation of species.

### 2.3 Thesaurus

The Thesaurus service provides a set of searchable terms and links for the species sightings, species names and threatened biodiversity web services. It is intended for use by application developers seeking provide a BioNet search feature in their applications.

## 3 Enhancements and fixes

### 3.1 Vegetation classification

The Vegetation Classification web service has been revised and updated to accommodate the co-existence of PCTs defined using the new quantitative method and described by

growth form, as well as existing PCTs that have been described using species by stratum. In addition, benchmark data used by the BAM Tool have been added. The changes per entity set are outlined below:

- **VegetationClassification\_PCTAssessmentData** has been removed, with the data associating threatened species and ecological communities with the PCT moved to the **VegetationClassification\_PCTDefinition** entity set.
- **VegetationClassification\_PCTDefinition** has had additional data added to it, including IBRA Region and Subregion, environmental data such as rainfall, and additional data on current and pre-European extent. Floristic data including frequency, cover and height have been moved to the **VegetationClassification\_PCTStratumData**. A new field **authority** has been added. This field will indicate the method used for defining the PCT to indicate if further descriptive floristic data is given in the **VegetationClassification\_PCTStratumData** or **VegetationClassification\_PCTGrowthForm** entity set.
- **VegetationClassification\_PCTBenchmarks** has been added. This contains the benchmark data used by the BAM Tool.
- **VegetationClassification\_PCTStratumData** has been added. This contains the floristic data by stratum previously given in the **VegetationClassification\_PCTDefinition** entity set.
- **VegetationClassification\_PCTGrowthForm** has been added. This contains floristic data describing the PCT based on the growth form of the species, namely the group frequency and median cover score for the species.

## 3.2 Species Sightings

The following changes have been applied to the **SpeciesSightings\_CoreData** entity set.

Fields removed:

- **CMA**
- **CMASubregion**
- **PKID**

Fields changed:

- **stateConservation** – this now only contains the legal status of the species with NSW under NSW legislation.
- **countryConservation** – this now only contains the legal status of the species with Australia under Commonwealth legislation.

Fields added:

- **IBRA** – the name of the IBRA Region the record occurs in.
- **IBRASubregion** – the name of the IBRA Subregion that the record occurs in
- **LLS** – the Local Land Services area the record occurs in
- **SensitivityClass** – the sensitive class (as per the OEH Sensitive Species Policy) of the species identified in the sighting. These data were previously given in the **stateConservation** field.
- **protectedInNSW** – an indicator if the species identified in the sighting is protected under the *National Parks and Wildlife Act 1974* (NSW). These data were previously given in the **stateConservation** field.



- **migratorySpeciesAgreement** – the list of migratory species agreements applicable to the species identified in the sighting. These data were previously given in the countryConservation field.

## 4 Documentation

Documentation for BioNet Web Services, including a standards guide and developer guide, is available on the [BioNet website](#).

The following documents have been created or updated because of changes implemented in Release 3.0:

- BioNet Web Services Species Sightings Web Service Data Standard is now at Version 6.0.
- BioNet Web Services Vegetation Classification Web Service Data Standard, Version 2.0 has been published.
- BioNet Web Services Threatened Biodiversity Web Service Data Standard, Version 1 has been published.
- BioNet Web Services Species Names Web Service Data Standard, Version 1 has been published.
- BioNet Web Services Thesaurus Web Service Data Standard, Version 1 has been published.
- Developer Guidelines have been updated for Release 3.0.

## 5 Warnings and known limitations

### 5.1 SpeciesSightings\_CoreData dterms\_modified field

The date in dterms\_modified will not be updated when data in the following fields change during the daily delta updates from BioNet Atlas of NSW Wildlife:

- county
- mapSheetNumber
- dynamicProperties; botanicalDivision
- dynamicProperties; CMA
- dynamicProperties; CMAsubregion
- dynamicProperties; floraReserve
- dynamicProperties; IBRA
- dynamicProperties; reserve
- dynamicProperties; stateForest.