



DEPARTMENT OF PLANNING, INDUSTRY & ENVIRONMENT

# BioNet Web Services

Release notes

March 2020 (Release 3.2)



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Environment, Energy and Science  
Department of Planning, Industry and Environment  
Locked Bag 5022, Parramatta NSW 2124  
Phone: +61 2 9995 5000 (switchboard)  
Phone: 1300 361 967 (Environment, Energy and Science enquiries)  
TTY users: phone 133 677, then ask for 1300 361 967  
Speak and listen users: phone 1300 555 727, then ask for 1300 361 967  
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# Contents

1.	Background	1
2.	New functionality	3
2.1	Systematic Flora Survey Data	3
3.	Enhancements and fixes	4
3.1	VegetationClassification_PCTDefinition	4
3.2	All web services entity sets	5
4.	Documentation	6
5.	Warnings and known limitations	6

# 1. Background

The BioNet Web Services initiative is a program of work conducted by the New South Wales Department of Planning, Industry and Environment (DPIE). It is progressively making 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 the Department, 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 publishes the first version of the BioNet Systematic Flora Survey Web Service. This web service provides access to site level vegetation survey data using structure and content based on a proof-of-concept national vegetation plot data standard developed under the National Vegetation Information Working Group. This implementation includes the addition of fields specific to New South Wales.

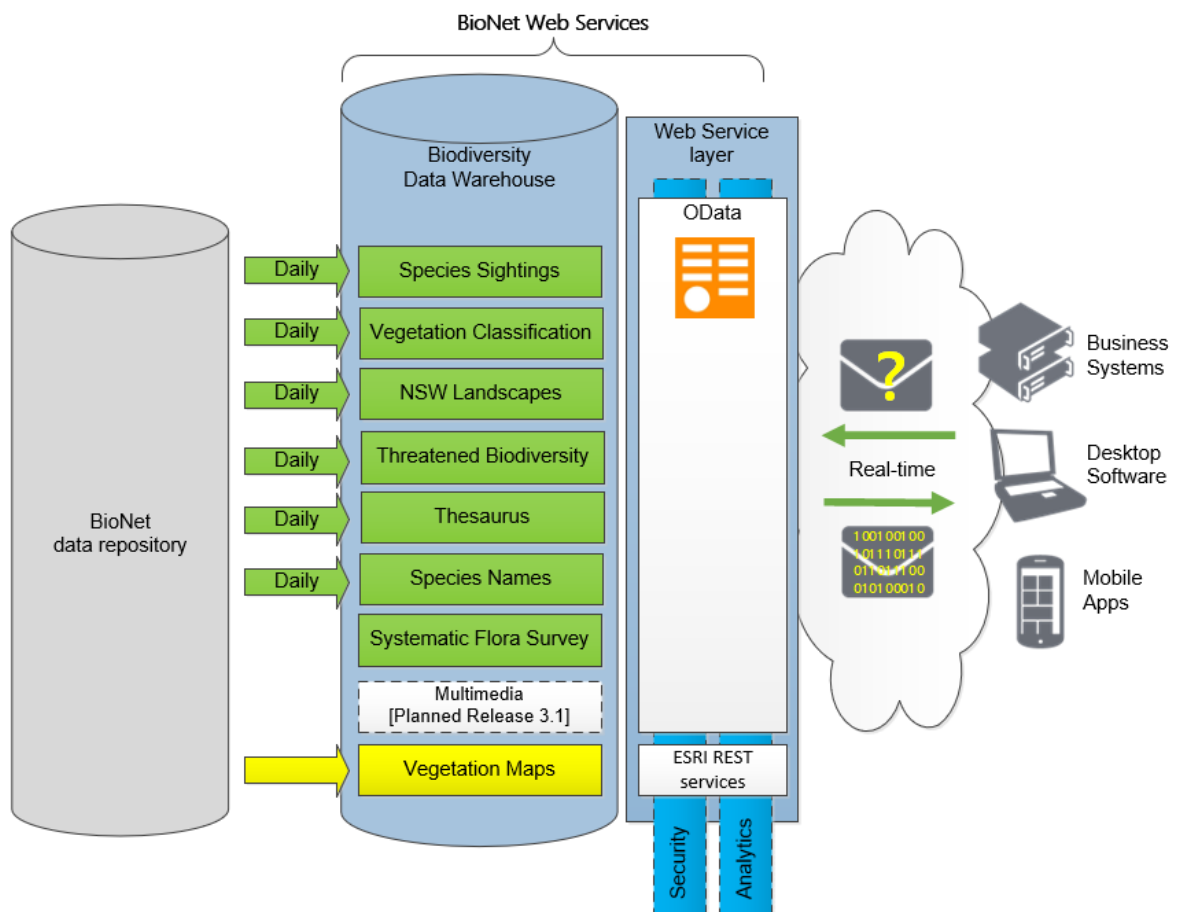


Figure 1 Overview of BioNet Web Services implementation

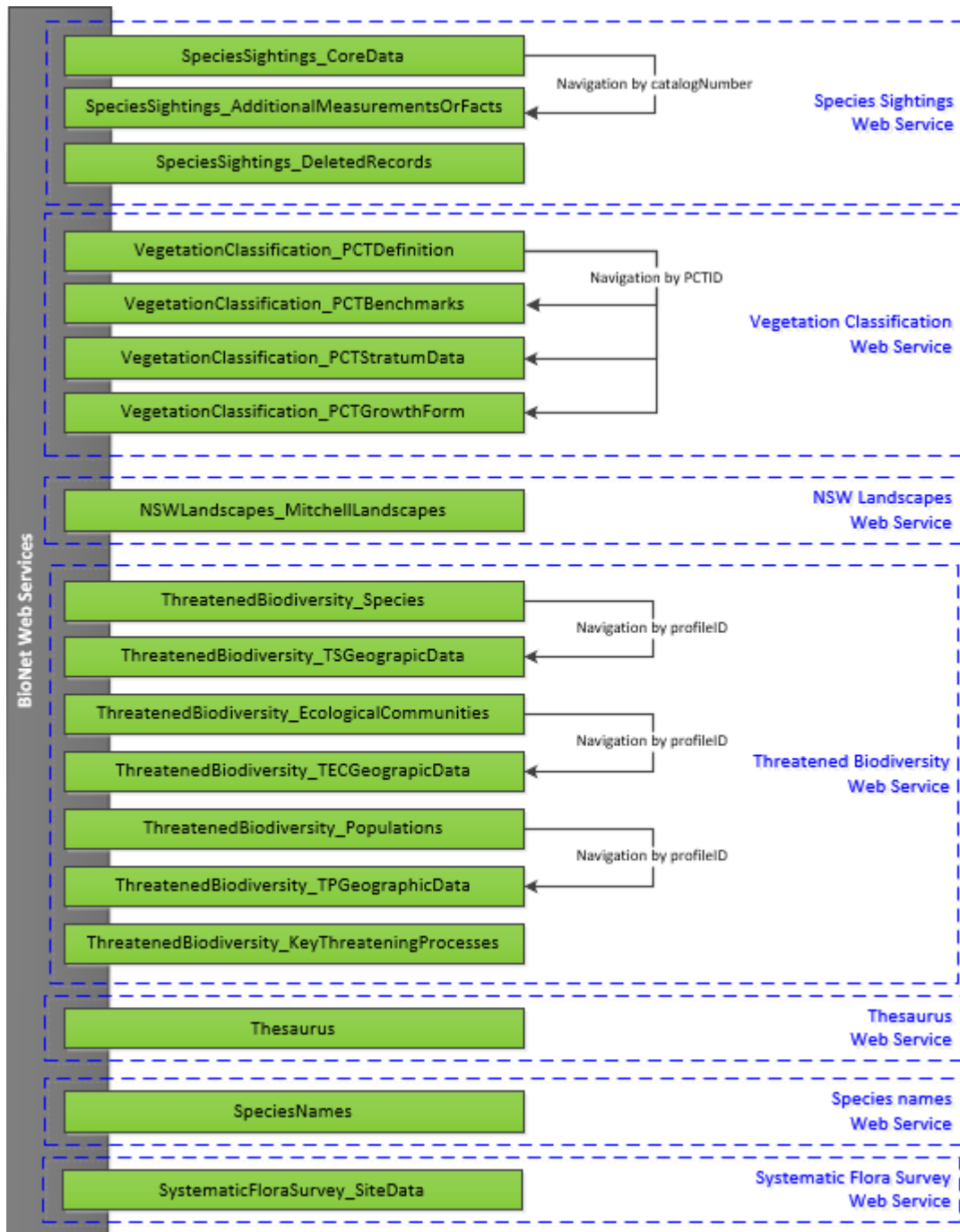


Figure 2 Overview of the existing OData entity sets that comprise Release 3.2, including navigation links between entity sets

## 2. New functionality

### 2.1 Systematic Flora Survey Data

Systematic flora survey site data from the BioNet Atlas database has been added to the BioNet Web Service. Data are shared via a single 'entity set', SystematicFloraSurvey\_SiteData, that is based on provisional national standard developed through a sub-group of the National Vegetation Information Working Group. This release includes x-y location coordinates and other site level metadata including SurveyID.

At release the data service contains over 110,000 flora survey sites (i.e. plots). ~45,000 of these have been used in the development of the eastern NSW quantitative plant community type classification, and hence represent important reference sites for PCT identification. These sites will include values for PCT\_ID, PCT\_Name. All sites include new environmental attributes (rainfall, temperature and elevation) that provide additional PCT definition.

Detailed information on the data in this new entity set is given in the BioNet Systematic Flora Survey Web Service data standard, available via the [BioNet resources page](#).

## 3. Enhancements and fixes

### 3.1 VegetationClassification\_PCTDefinition

The following changes have been applied to the VegetationClassification\_PCTDefinition - entity set. These changes streamline plant community type (PCT) naming, establish relationships to key environmental layers to improve PCT identification, and establish links to reference vegetation plots used the development of quantitatively derived PCTs.

#### Fields added:

- PCTScientificName – the scientific name for the PCT
- classificationConfidenceLevel – indicator of the confidence with which the PCT has been classified
- totalNumberOfReplicates – number of replicates in total for a given PCT
- numberOfPrimaryReplicates – number of replicates with ‘primary’ assignment category for a given PCT
- numberOfSecondaryReplicates – number of replicates with ‘secondary’ assignment category for a given PCT
- minimumElevationInMeters, medianElevationInMeters, maximumElevationInMeters – minimum, median and maximum elevation for all replicates associated with a given PCT
- minimumAnnualRainfallInMillimeters, medianAnnualRainfallInMillimeters, maximumAnnualRainfallInMillimeters – minimum, median and maximum annual rainfall for all replicates associated with a given PCT
- minimumAnnualMeanTemperatureInCelsius, medianAnnualMeanTemperatureInCelsius, maximumAnnualMeanTemperatureInCelsius – minimum, median and maximum annual mean temperature for all replicates associated with a given PCT
- medianNativeSpeciesRichness – the median number of native species recorded in a replicate
- TECAssessed – indicator of whether the PCT has been assessed for associated TECs
- stateTECFitStatus, countryTECFitStatus – indicator of the relationship between the PCT and the relevant TEC.

These new fields implemented in BioNet Vegetation Classification application in Releases 3.2.2 and Release 3.2.3, are now published in the web service as described above. Note: full detail on these fields is provided in the web service data standard document. See the ‘Documentation’ section below.

#### Field names corrected:

- groupFrequency – corrected to speciesFrequency
- growthForm – corrected to primaryGrowthFormGroup

These field names have been revised to provide a clearer indication of content and to align with field names in other BioNet applications and web services.

#### Fields removed:

- PCTCommonNameSynonym

This field has been retired from use in the Vegetation Classification PCT Definition web service as it was only partially populated.

- preEuropeanQualifiers

- currentQualifiers

These fields were not being populated in the Vegetation Classification: PCT Definition web service. This bug has been resolved and the qualifier fields are presented as required in the web service.

## **3.2 All web services entity sets**

### **Global data value changes:**

- dcterms\_rightsHolder
- institutionCode

In line with departmental name changes, the Institution code value 'NSW Office of Environment and Heritage' has been updated to 'NSW Department of Planning, Industry and Environment'. This change has also been implemented in the dcterms\_rightsHolder field where NSW Department of Planning, Industry and Environment is the rights holder for the data asset.



## **4. Documentation**

Documentation for BioNet Web Services, including updated data standard guides, is available via the BioNet Web Services web page.

Refer to the [BioNet resources page](#) for all BioNet Web Services data standards.

## **5. Warnings and known limitations**

The eastern NSW plant community type data released in this service (i.e. PCT\_ID and PCT\_Name) are expected to be approved for use in the NSW Biodiversity Offset Scheme in late 2020 – early 2021. Until that time should not be used in formal biodiversity assessments under the scheme.