

# Package ‘prioritizrdata’

May 22, 2018

**Type** Package

**Version** 0.2.2

**Title** Conservation Planning Data Sets

**Description**

Conservation planning data sets for learning how to use the 'prioritizr' package <<https://CRAN.R-project.org/package=prioritizr>>.

**Suggests** testthat, roxygen2, knitr, rgeos

**Depends** R(>= 3.4.0), raster, sp

**License** GPL-3

**LazyData** true

**URL** <https://prioritizr.github.io/prioritizrdata>,  
<https://github.com/prioritizr/prioritizrdata>

**BugReports** <https://github.com/prioritizr/prioritizrdata/issues>

**RoxygenNote** 6.0.1

**Collate** 'package.R' 'salt\_data.R' 'tas\_data.R'

**NeedsCompilation** no

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prioritizrdata	<b>prioritizrdata:</b> <i>Conservation Planning Data Sets</i>
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### Description

The **prioritizrdata** package is a supplemental package that contains example datasets for conservation planning. It is intended to be used alongside the **prioritizr** package—a package for building and solving systematic conservation prioritization problems using integer linear programming (ILP) techniques—and provides little functionality itself.

### Details

This package contains the following datasets:

**tas\_data** This data set was obtained from the "[Introduction to \*Marxan\*](#)" course and was originally part of a larger spatial prioritization performed under contract to Australia's Department of Environment and Water Resources. This data set contains vector-based planning unit data and data for the spatial distribution of 62 vegetation classes in Tasmania, Australia. Refer to the Tasmania vignette in the **prioritizr** package for a worked example with this dataset.

**salt\_data** This dataset is from an online [Marxan-based planning tool](#) created for the Coastal Douglas-fir Conservation Partnership (CDFCP). It contains raster-based planning unit data and the data for the spatial distributions of five key ecological communities in the area. Refer to the Salt Spring Island vignette in the **prioritizr** package for a worked example with this dataset

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salt_data	<i>Salt Spring Island conservation planning data</i>
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### Description

This data was obtained as part of an online [Marxan-based planning tool](#) created for the Coastal Douglas-fir Conservation Partnership (CDFCP; Schuster *et al.* 2017). For a worked example with this dataset, refer to the [Salt Spring vignette](#). The scenario is intended to provide an example of how raster planning unit data can be used in the **prioritizr** package.

## Usage

```
data(salt_features)

salt_pu

salt_features
```

## Format

**salt\_features** `RasterStack-class` object  
**salt\_pu** `RasterLayer-class` object.

## Details

The data set contains the following items:

**salt\_pu** Planning unit data. A single band `RasterLayer-class` object where each one hectare pixel contains the monetary cost of acquiring the area (BC Land Assessment 2015).

**salt\_features** Biodiversity feature data. The probability of occurrence commensal of five key ecological communities found on Salt Spring island. Each layer in the `RasterStack-class` object represents a different community type. These classes are old forest (1), savanna (2), wetland (3), shrub (4), and a layer representing the inverse probability of occurrence of human commensal species (5). For a given layer, the values indicate the composite probability of encountering the suite of bird species most commonly associated with that community type.

## References

BC Assessment (2015) Property Information Services. Available at <https://www.bcassessment.ca> [Date Accessed 2016/06/13].

Morrell N, Schuster R, Crombie M, and Arcese P (2017) *A Prioritization Tool for the Conservation of Coastal Douglas-fir Forest and Savannah Habitats of the Georgia Basin*. The Nature Trust of British Columbia, Coastal Douglas Fir Conservation Partnership, and the Department of Forest and Conservation Sciences, University of British Columbia. Available at [http://peter-arcese-lab.sites.olt.ubc.ca/files/2016/09/CDFCP\\_tutorial\\_2017\\_05.pdf](http://peter-arcese-lab.sites.olt.ubc.ca/files/2016/09/CDFCP_tutorial_2017_05.pdf) [Date Accessed 2017/10/09].

## Examples

```
# load data
data(salt_pu, salt_features)

# plot data
plot(salt_pu)
plot(salt_features)
```

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tas_data	<i>Tasmanian conservation planning data</i>
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## Description

This data set was obtained from the "[Introduction to \*Marxan\*](#)" course and was originally part of a larger spatial prioritization performed under contract to Australia's Department of Environment and Water Resources (Klein *et al.* 2007).

## Usage

```
data(tas_features)
```

```
tas_pu
```

```
tas_features
```

## Format

**tas\_features** `RasterStack-class` object

**tas\_pu** `SpatialPolygonsDataFrame` object.

## Details

The data set contains the following items:

**tas\_pu** Planning unit data. The attribute table has three columns containing unique identifiers ("id"), unimproved land values ("cost"), and their existing level of protection ("status"). Units with 50 % or more of their area contained in protected areas are associated with a status of 2, otherwise they are associated with a value of 0.

**tas\_features** The distribution of 62 vegetation classes in Tasmania, Australia. Each layer in the stack represents a different vegetation class. For a given layer, cells indicate the presence (value of 1) or absence (value of 0) of the vegetation class in an area.

## References

Klein C, Carwardine J, Wilson K, Watts M, and Possingham H (2007) *Spatial Prioritization Approaches for the Conservation of Biodiversity in Australia: Considering Conservation Costs, Ecological & Evolutionary Processes, and Large-Intact Areas*. Report to the Department of Environment; Water Resources.

## Examples

```
# load data
data(tas_pu, tas_features)

# plot data
```

*tas\_data*

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```
plot(tas_pu)  
plot(tas_features)
```

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