Biosecurity COMMONS

Biosecurity Commons Quick Start Guide

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Version: 0.2

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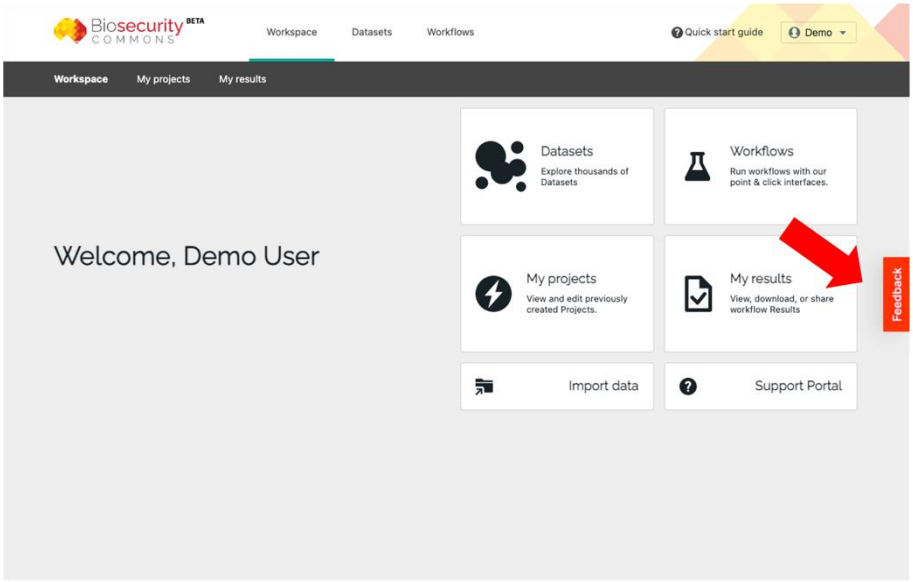
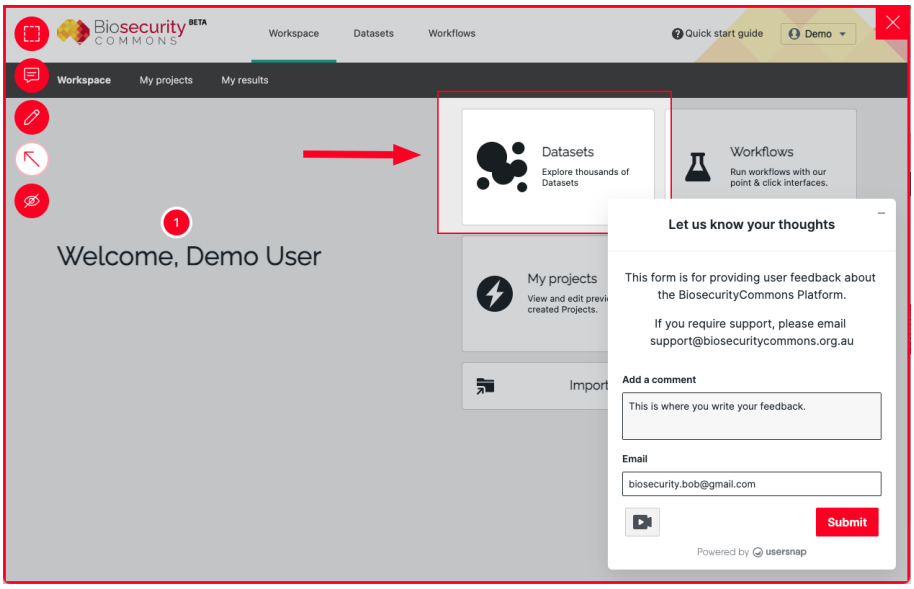
1 Biosecurity Commons beta platform

The beta release of the Biosecurity Commons platform is available for testing and gathering user feedback. This is an important part of refining and improving the platform prior to its release to production. We encourage all users of the platform to use the inbuilt feedback widget to easily provide feedback directly to our development team.

1.1 Feedback Widget

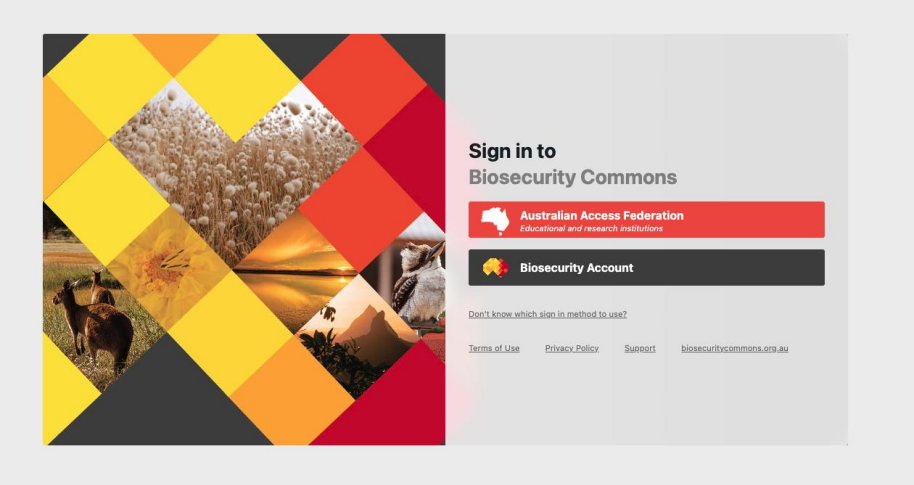
The feedback widget is available on the right-hand side of the web browser. Selecting the widget will launch the feedback tool and allow users to highlight areas, add comments and draw on the web page. Please include your email address so we can contact you if we need more information.





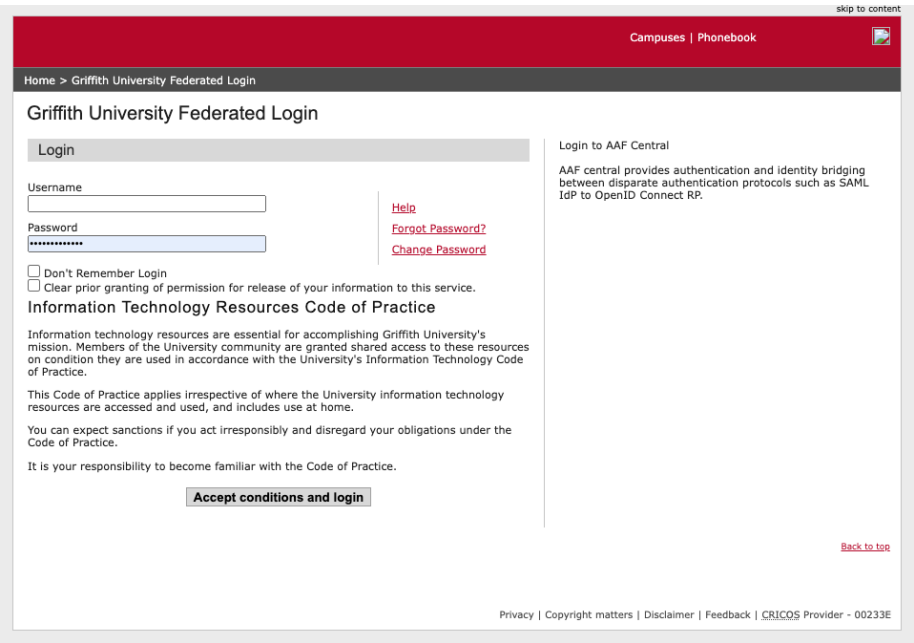
2 Logging in to Biosecurity Commons

The URL for the Biosecurity Commons production environment is:
https://app.biosecuritycommons.org.au



2.1 AAF Authentication

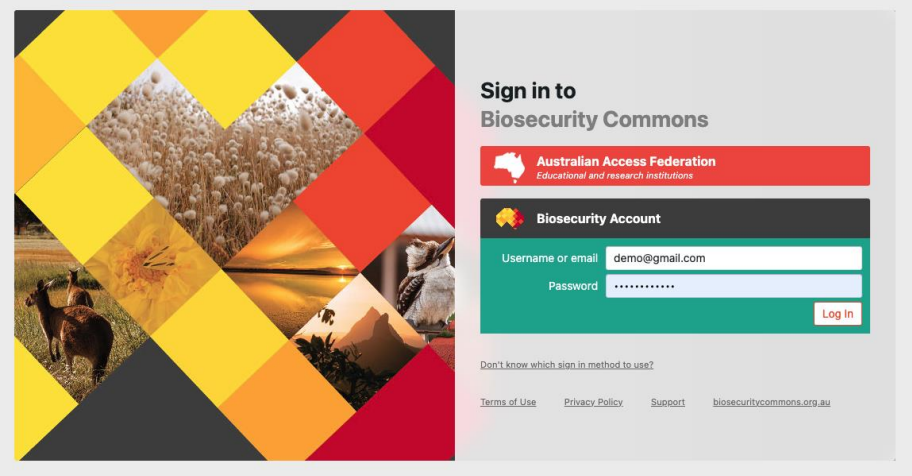
If your organisation is using AAF authentication (e.g. universities) select the AAF sign in option and you will be directed to your organisation's authentication page.



2.2 Biosecurity Account

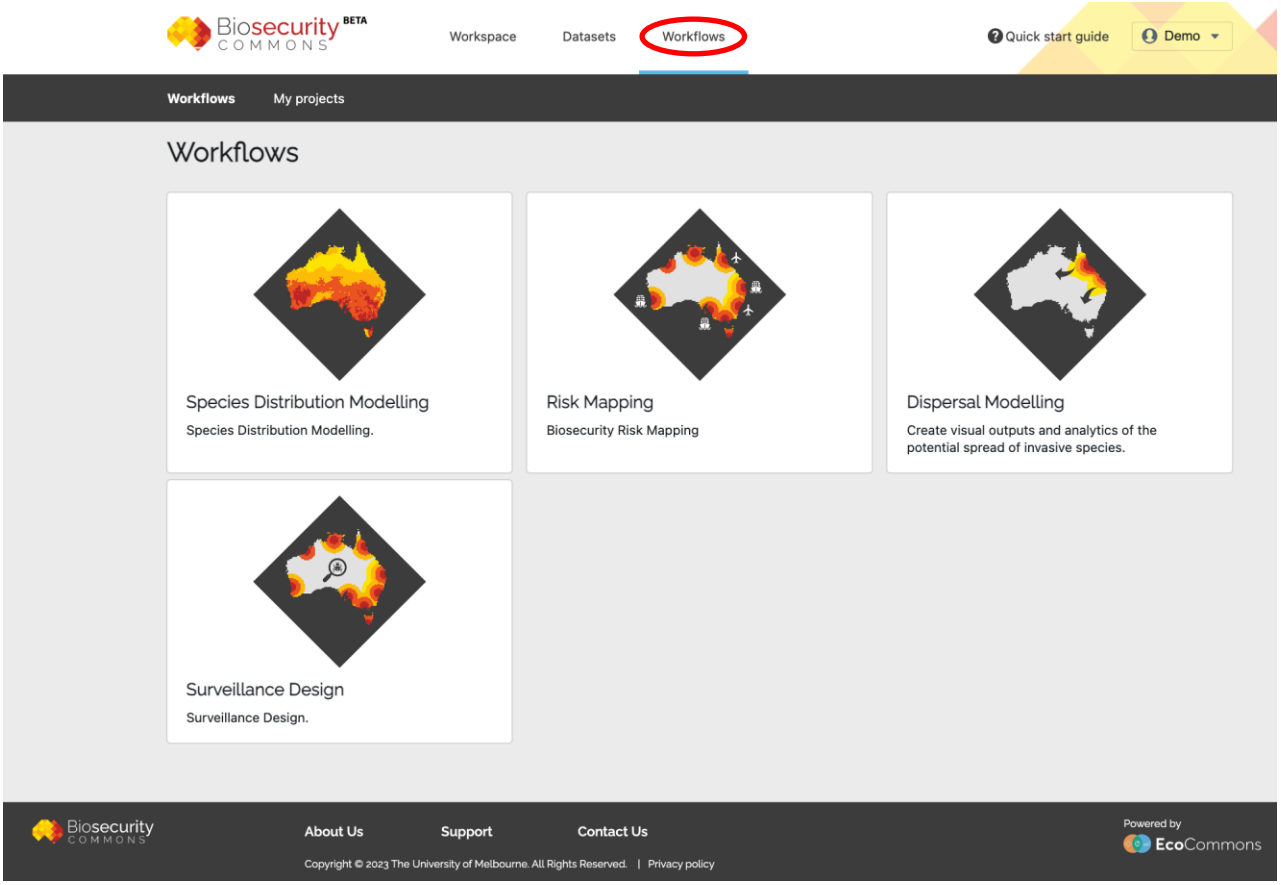
If your organisation doesn't have access to AFF you will need a Biosecurity user account login assigned to you, which will be a combination of your email and password.

If you require an account to be created please email support@biosecuritycommons.org.au (please note all accounts are created free of charge until 30 June 2022, after that time it will depend on future funding models that are yet to be determined).



3 Workflows

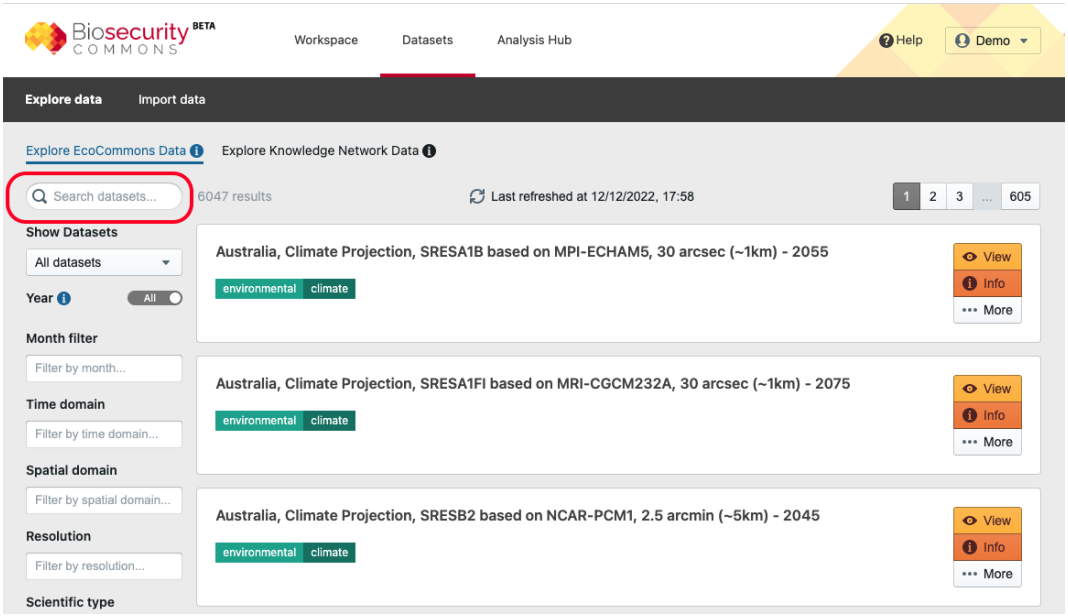
When complete, Biosecurity Commons will feature seven integrated workflows for modelling and analysing biosecurity risk and response. The workflows currently available in the platform can be accessed via the **Workflows** tab.



4 Data Catalogue

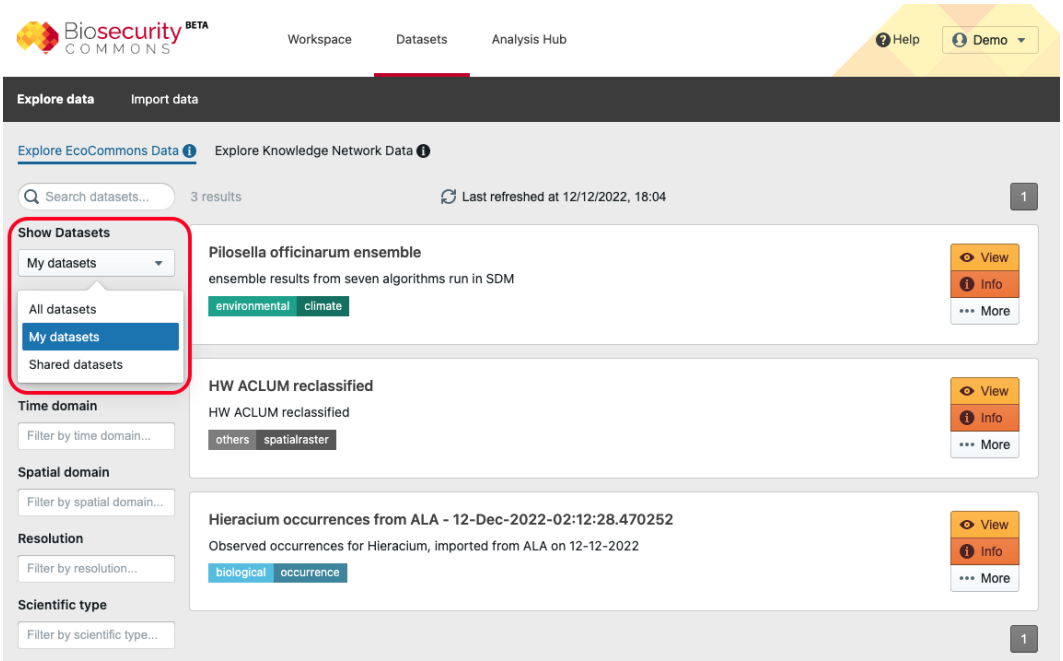
4.1 Curated datasets

Users can search and view the range of curated datasets available in the platform.



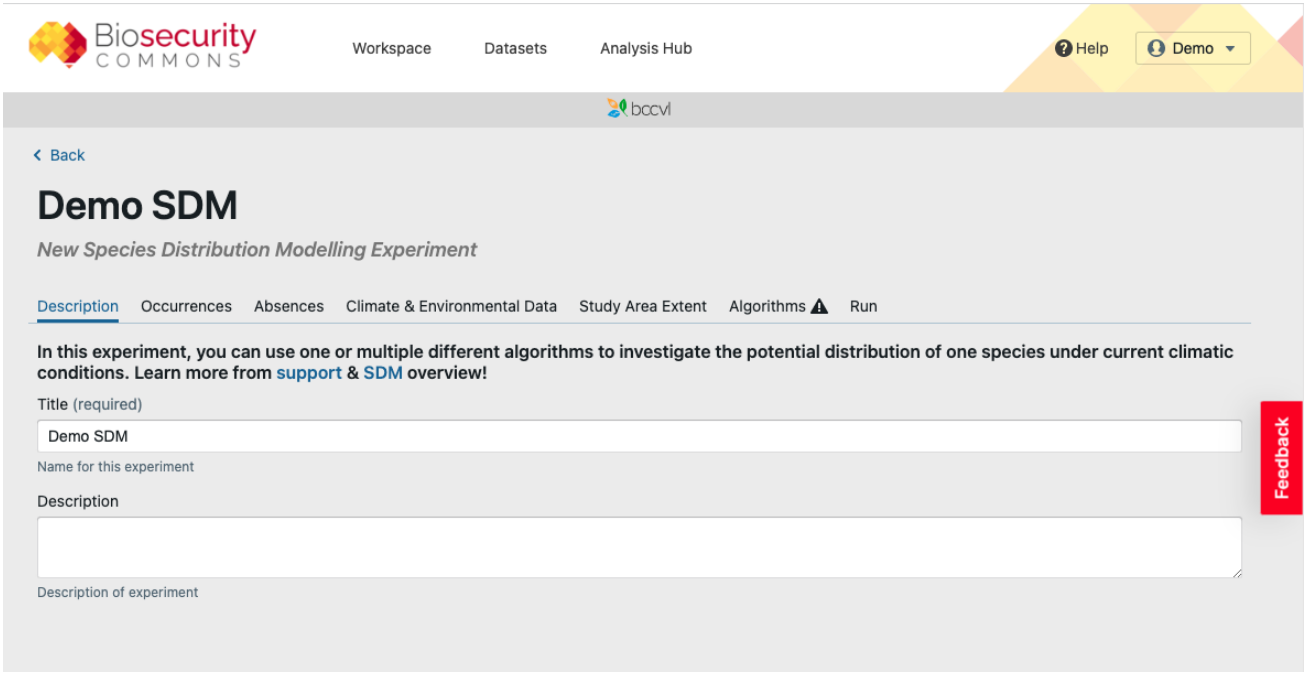
4.2 My datasets and Shared datasets

Users can search their own data collection or datasets that have been shared with them from other users.



5 Species Distribution Modelling

Users have access to a range of Species Distribution Modelling (SDM) experiments in Biosecurity Commons that can be accessed through the **Workflow** tab. Extensive information on the execution of SDM workflows can be found in the EcoCommons BCCVL Modelling Wizard guide and descriptions of the various SDMs can be found on the Biosecurity Commons Support Portal.



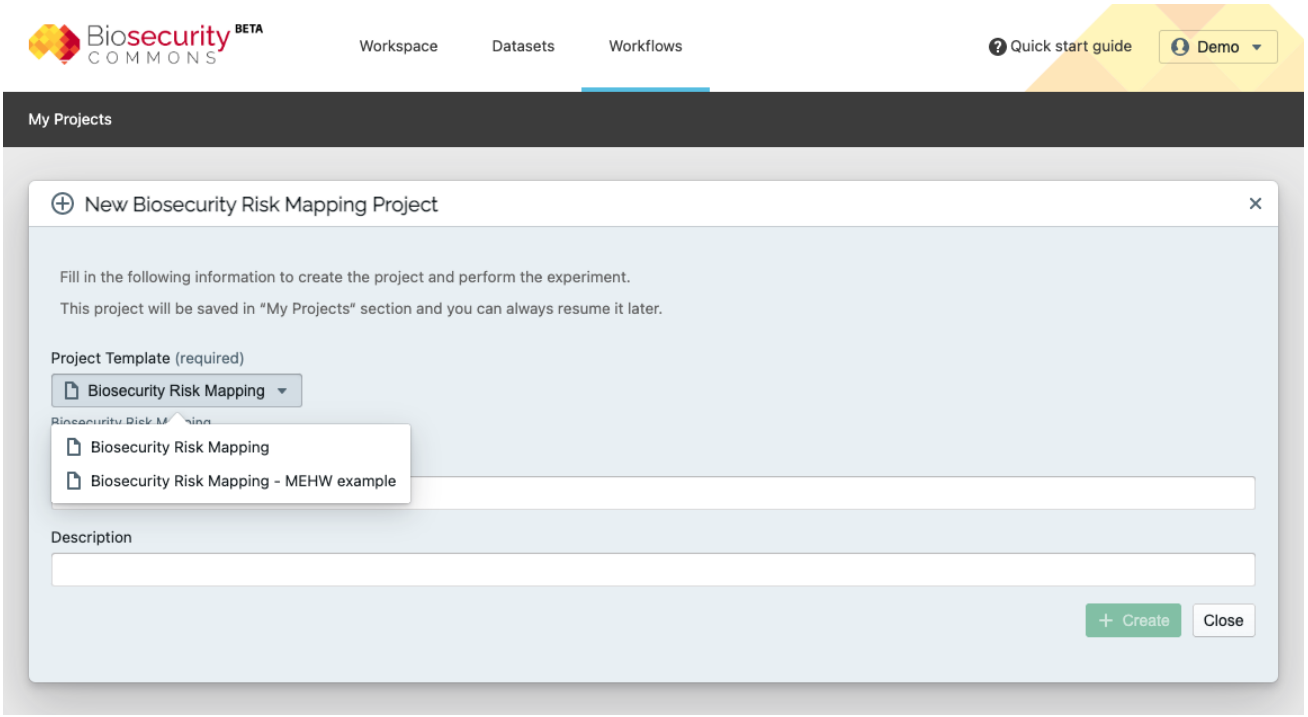
6 Risk Mapping

6.1 Introduction

This section provides a brief overview of the risk mapping workflow, for a detailed overview of the workflow please visit the Risk Mapping workflow overview support article.

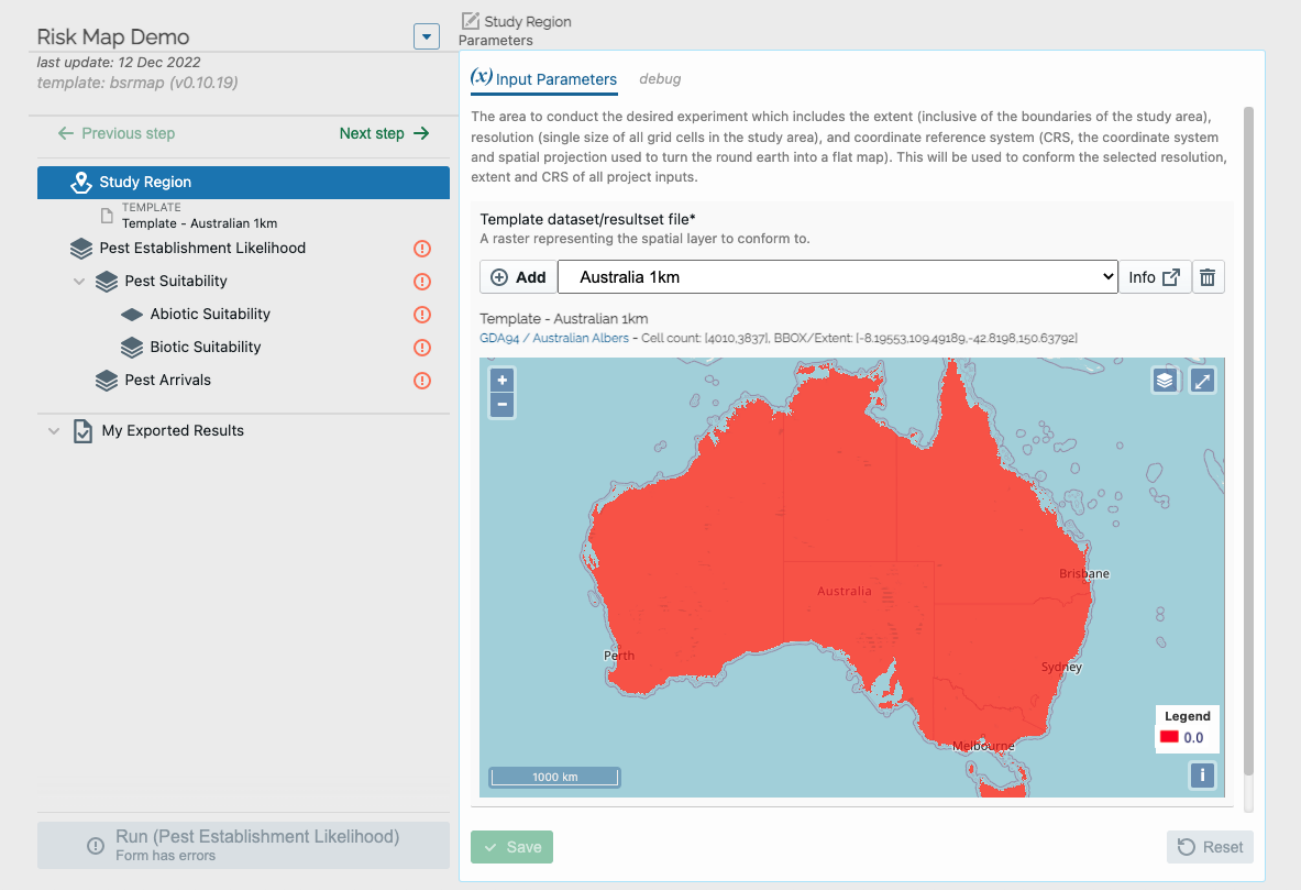
6.2 Project Template

When creating a new Biosecurity Risk Mapping Project you have the option to select from an empty template or an example template that is prepopulated with data. The empty template provides the basics structure of the Risk Mapping workflow but without any preloaded datasets (except for the default region, see section 6.3). The example template provides an easy way for new users to interact with the platform and see what a completed risk map might look like.



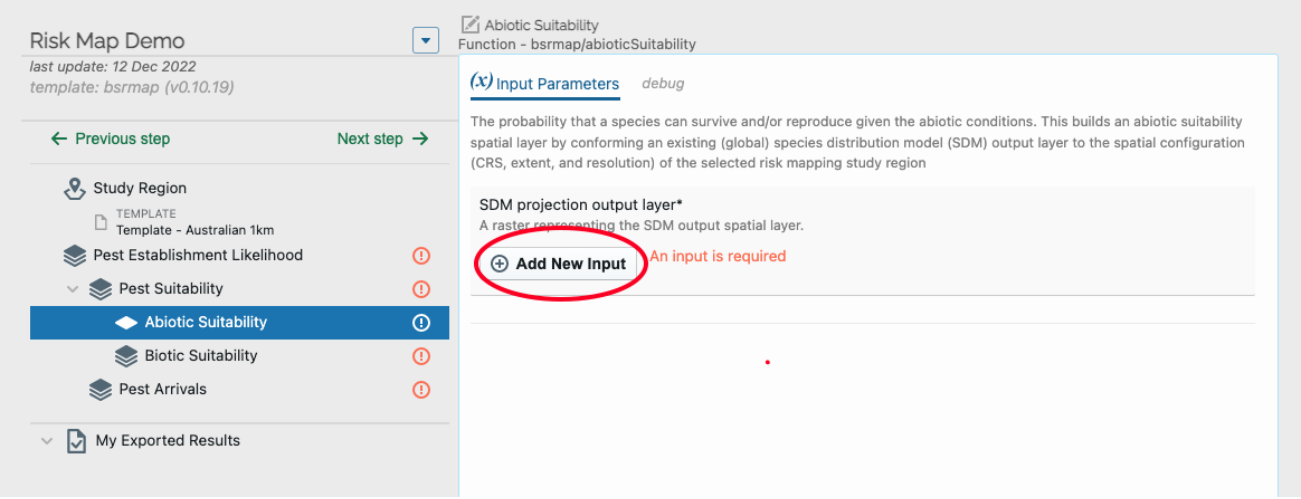
6.3 Study Region

When you start a Risk Mapping workflow you will be presented with the elements of the Risk Mapping tree on the left side of the screen. The study region (Australia at 1km resolution) is the only dataset loaded by default. The study region can be changed by the user, however at this stage you will need to upload your own dataset (geotiff).

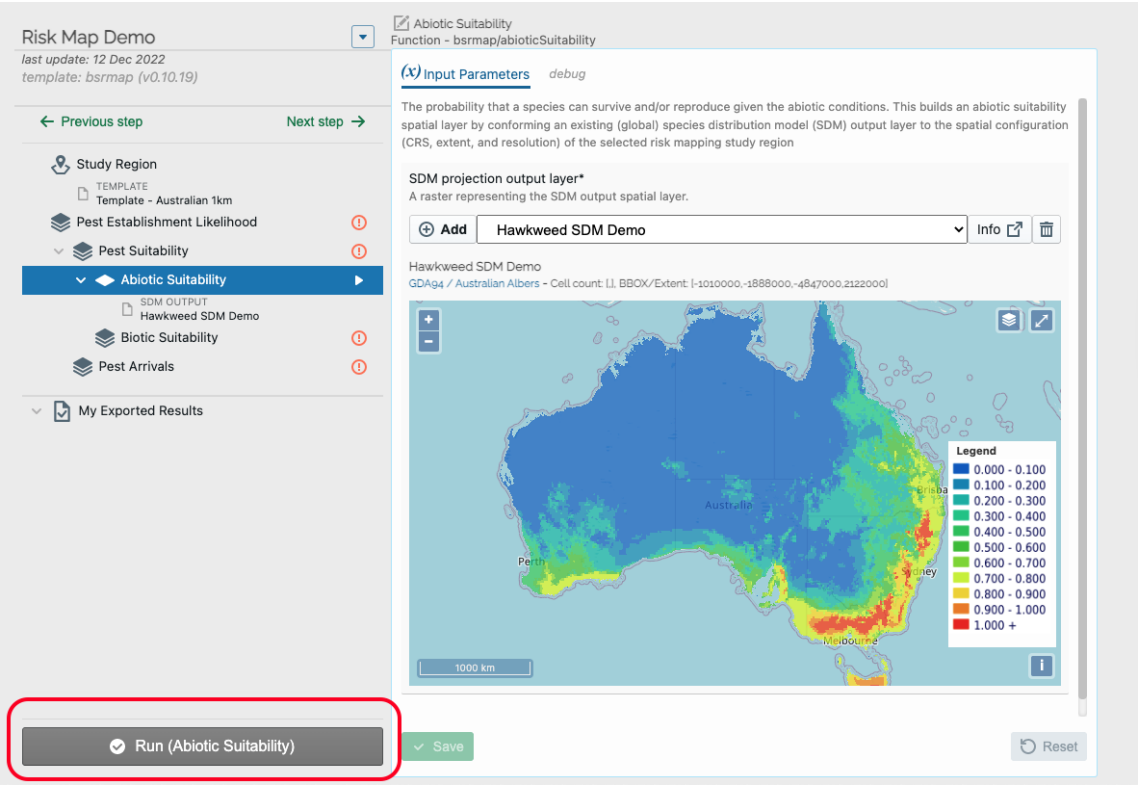


6.4 Abiotic Suitability

Use the **Add New Input** button to add the abiotic suitability layer (e.g. climatic suitability), this is usually a SDM that can be generated in the platform or imported by the user.

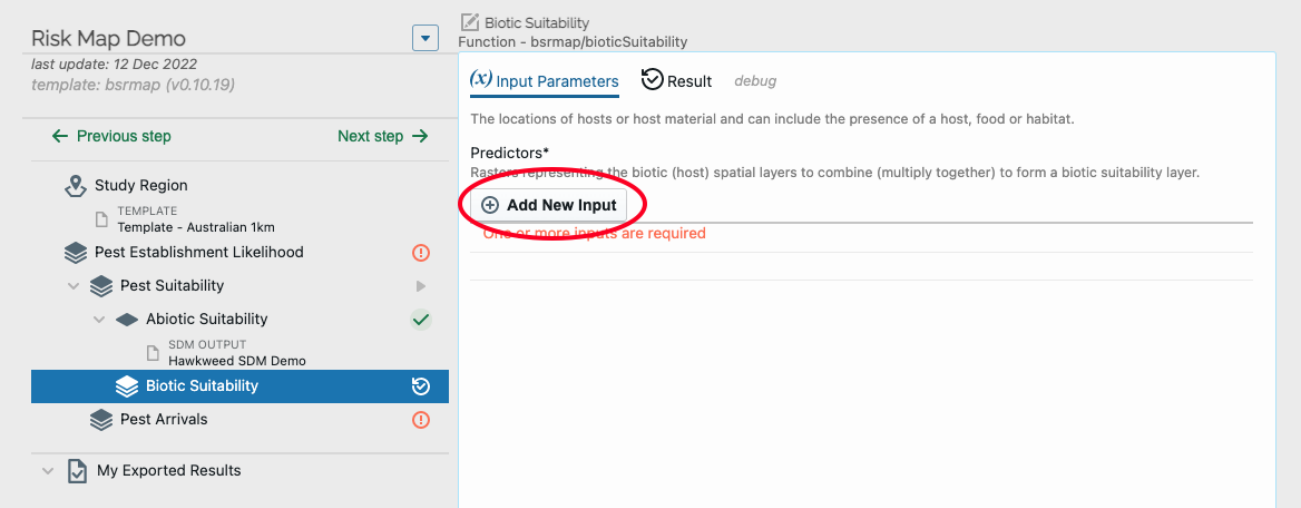


Run the **Abiotic Suitability** function. This will conform the abiotic layer to the study region extent, projection and resolution.

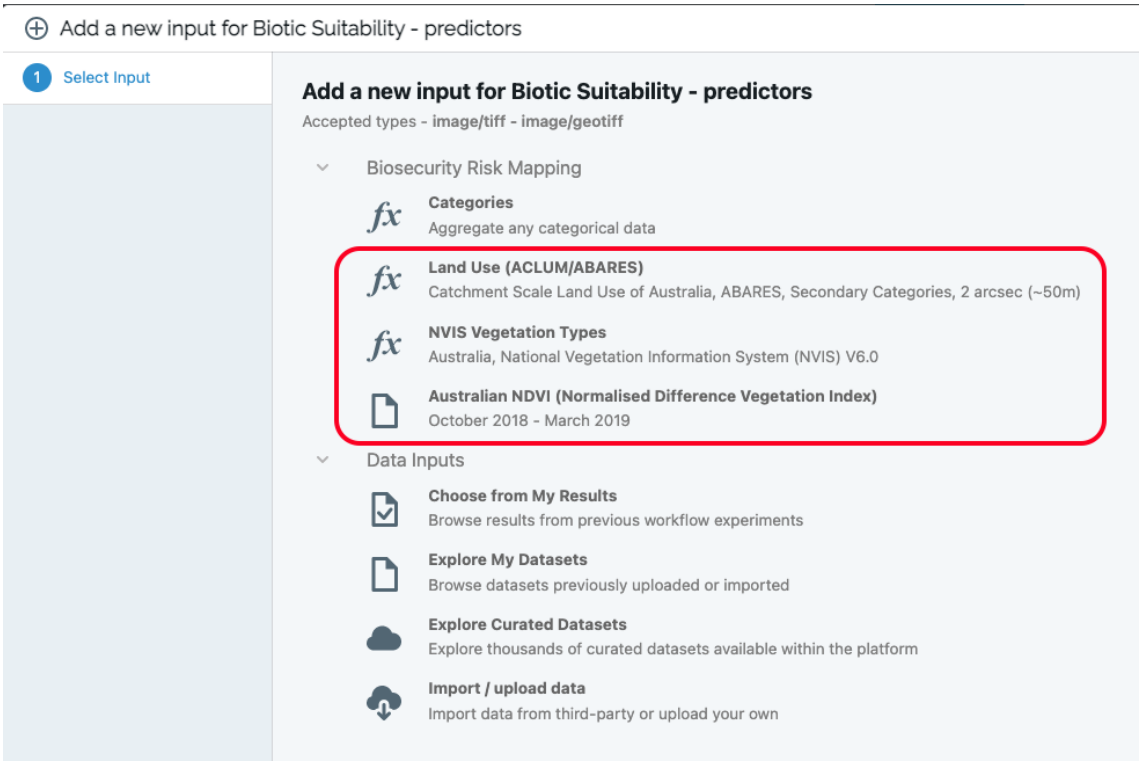


6.5 Biotic Suitability

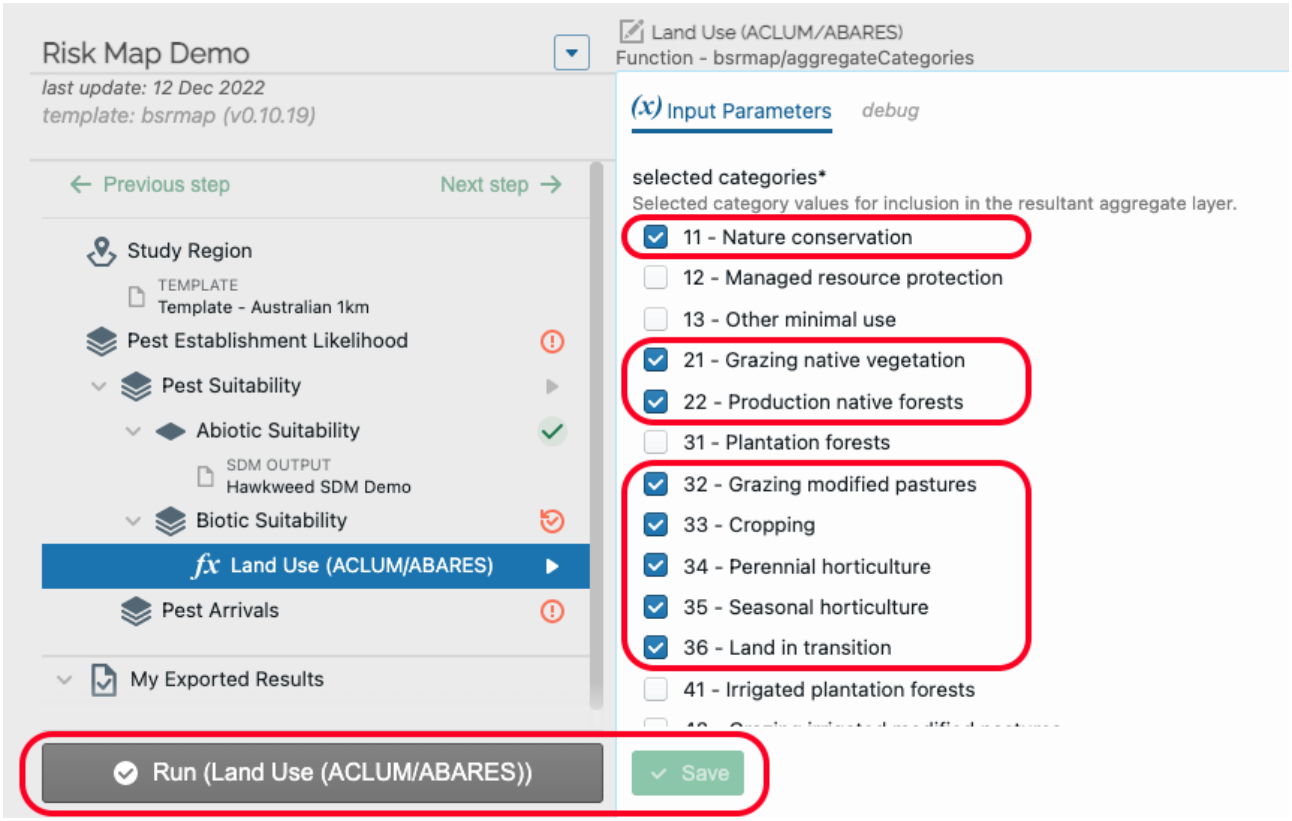
Use the **Add New Input** button to add one or more biotic suitability layers, representing the presence of host or food.



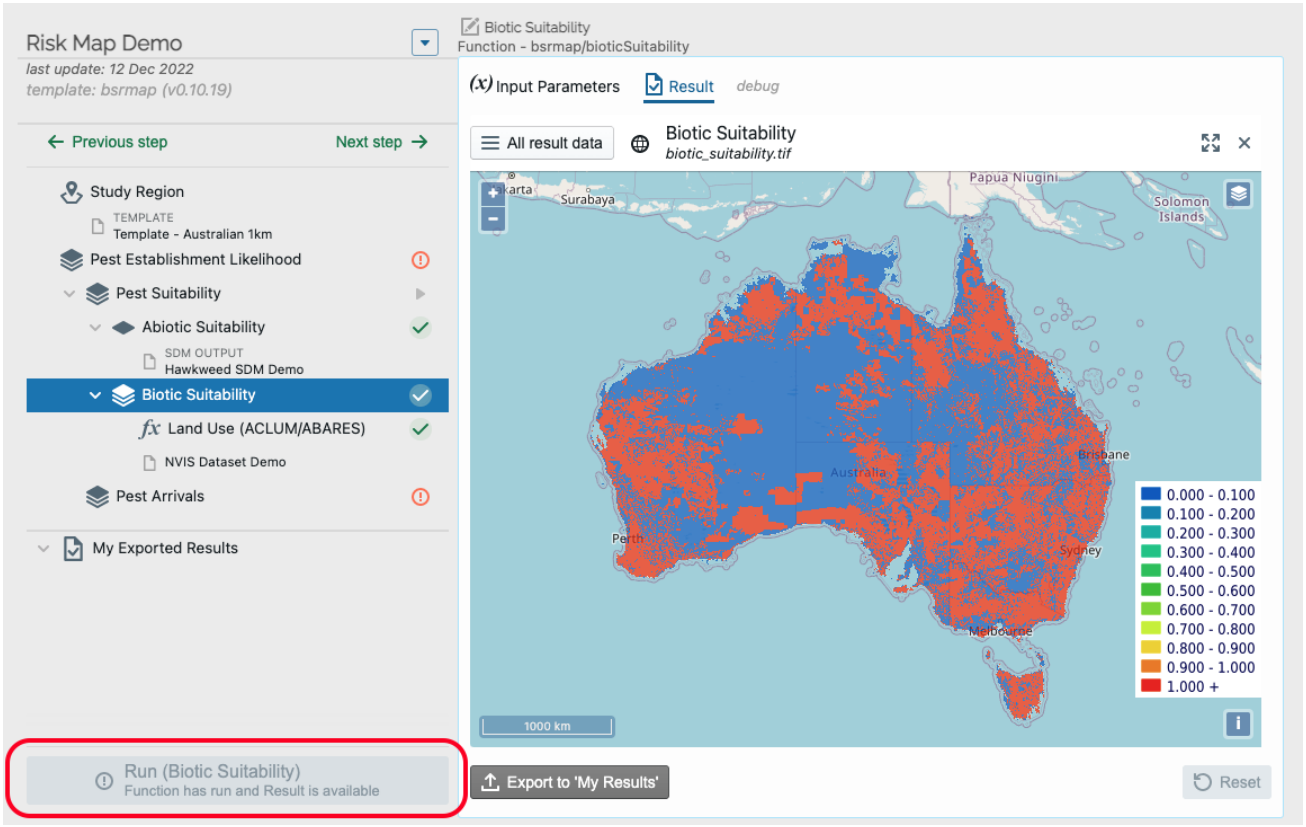
Users have the option of adding predefined curated datasets for land use (ACLUM), vegetation (NVIS) and NDVI.



In this example with the Land Use layer the user can select which categories are suitable for the species they are modelling. After selecting the categories select **Save** and then **Run** the function to generate the result.

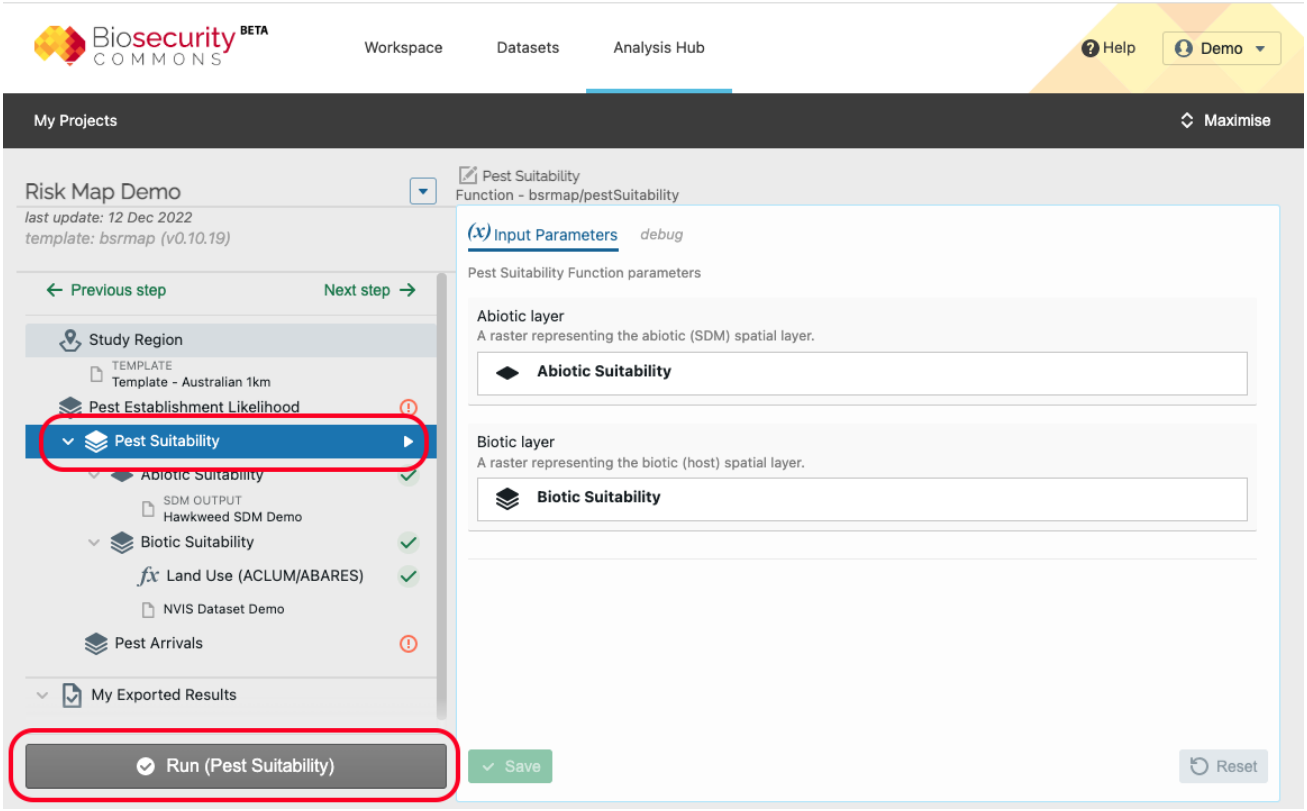


Run the **Biotic Suitability** function once all the biotic layers have been added.



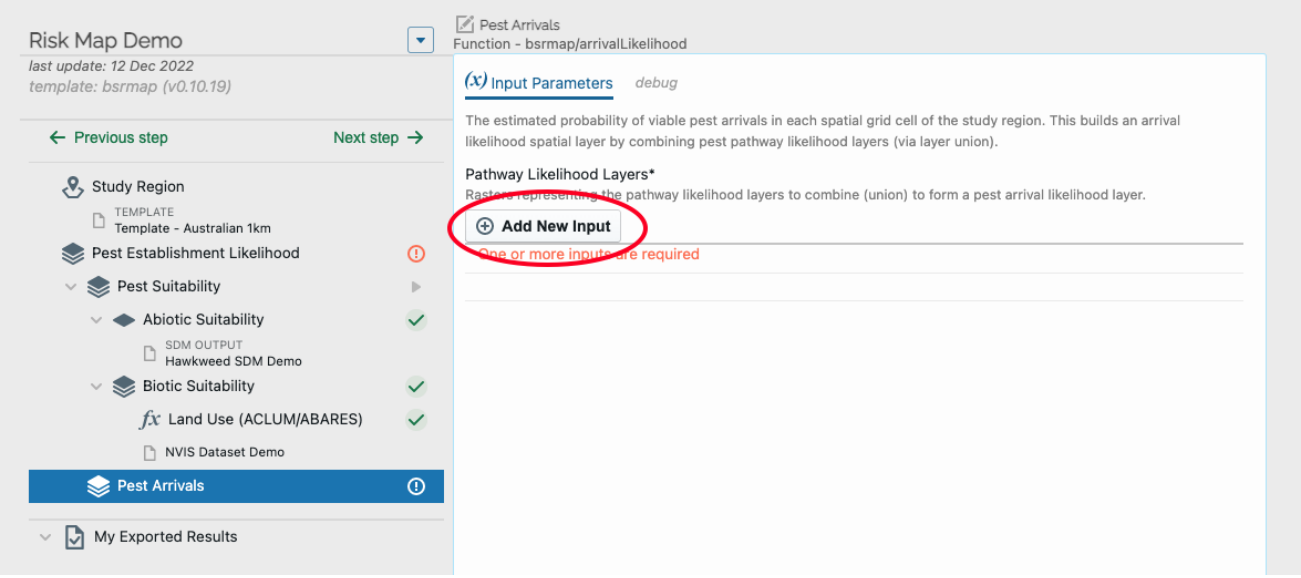
6.6 Pest Suitability

Once the abiotic and biotic suitability functions have been run the user needs to select **Pest Suitability** in the tree and run the Pest Suitability function.

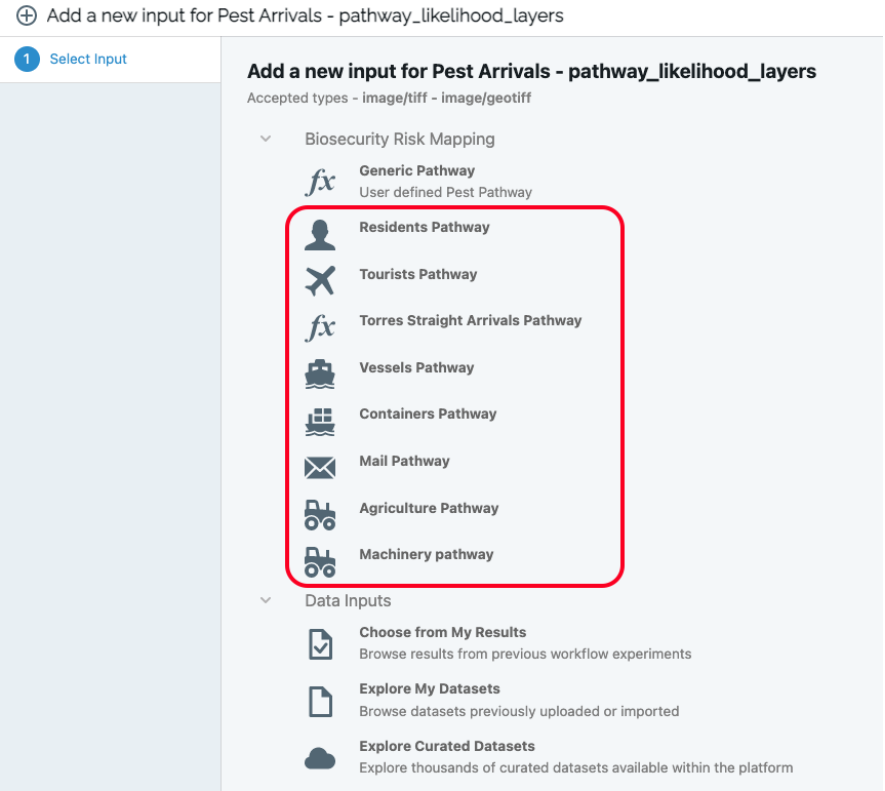


6.7 Pest Arrivals

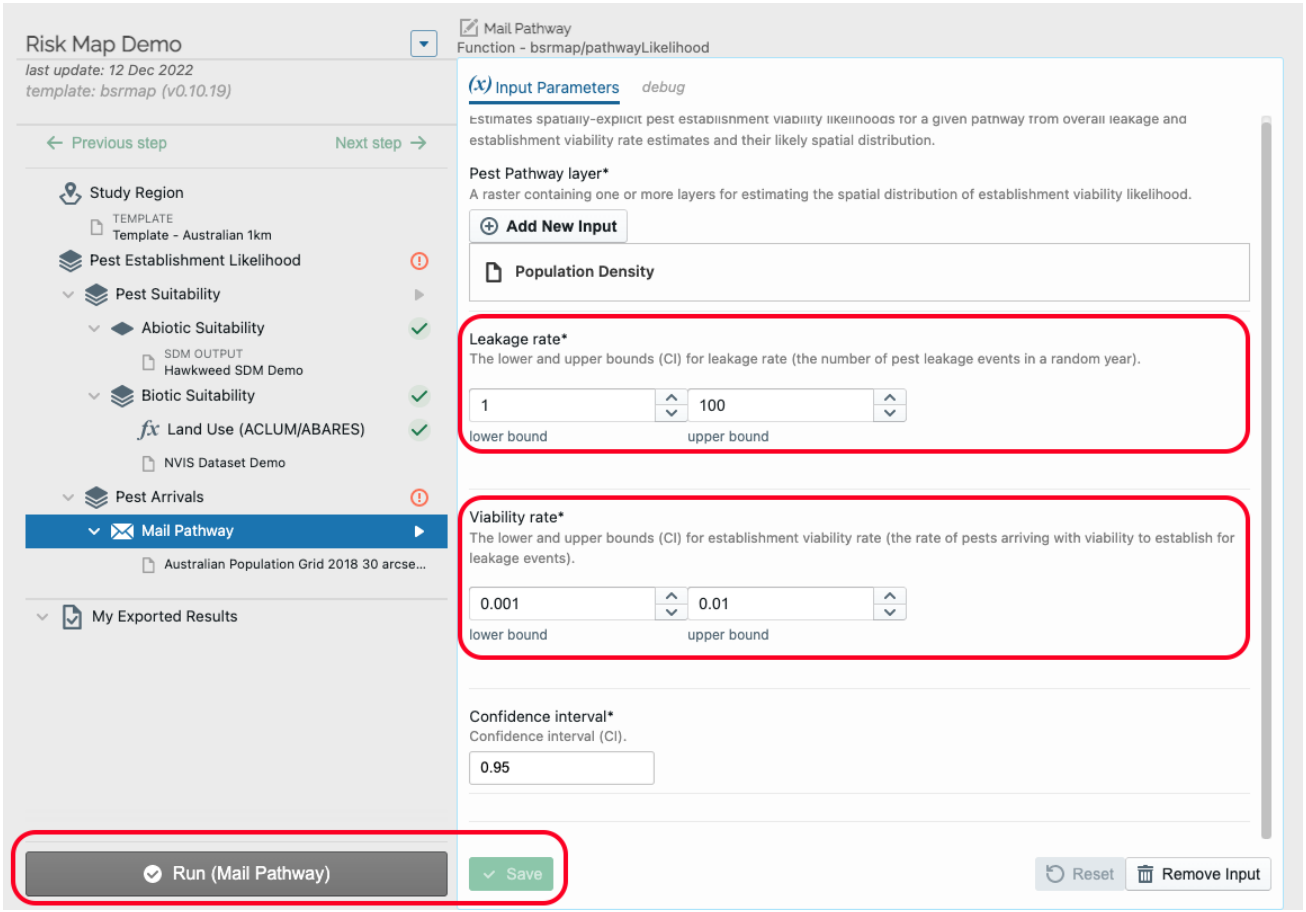
Use the **Add New Input** button to add one or more Pest Arrival layers, representing the different modes of entry into Australia



Users have the option of adding predefined curated functions for pest arrivals.

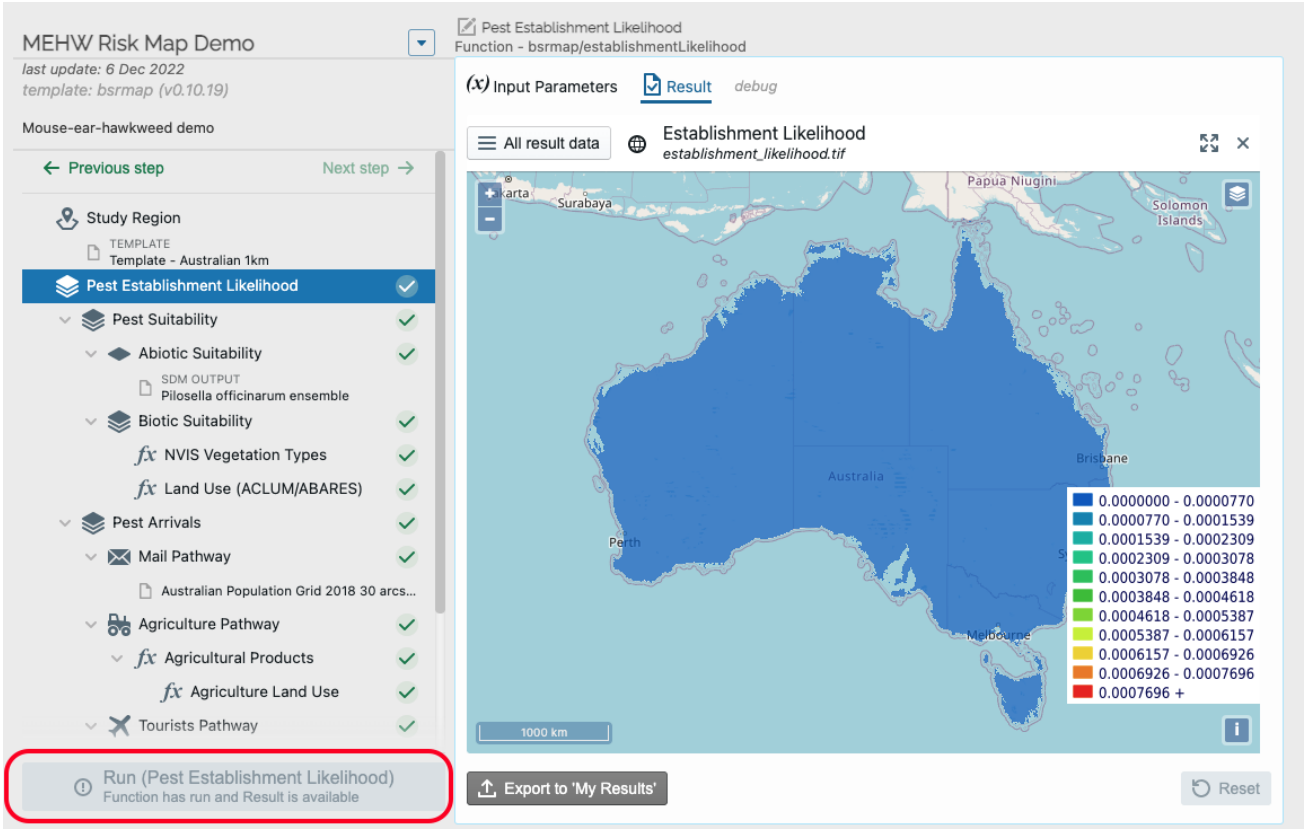


In this example with the Mail Pathway the user can select and adjust the **Leakage rate** and **Viability rate** parameters. After updating the parameters select **Save** and then **Run** the function to generate the result.



6.8 Pest Establishment Likelihood

Once the **Pest Suitability** and **Pest Arrivals** functions have been run you will be able to run the overall **Pest Establishment Likelihood** function.



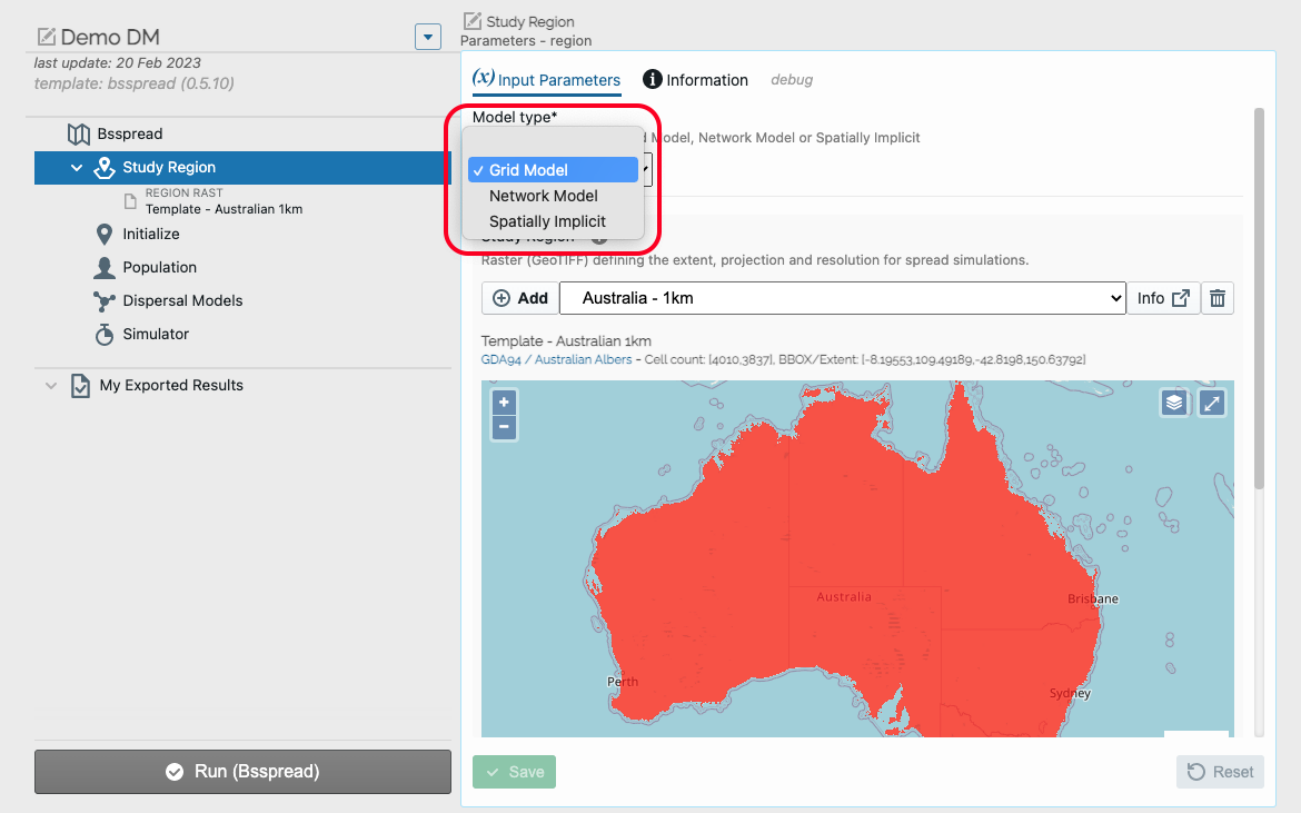
7 Dispersal (spread) Modelling

7.1 Introduction

This section provides a brief overview of the dispersal modelling workflow, for a detailed overview of the workflow please visit the Dispersal Modelling workflow overview support article.

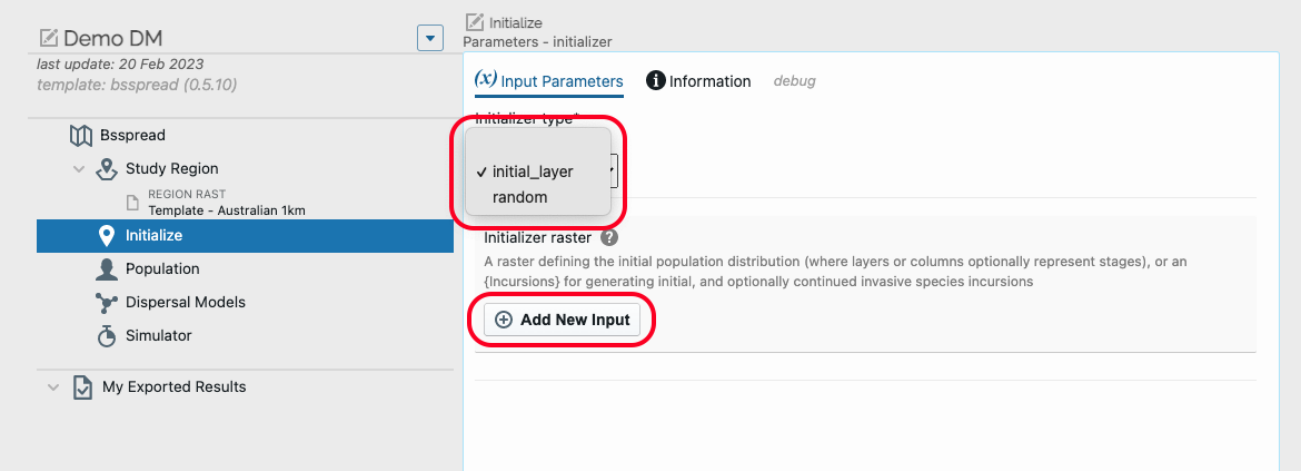
7.2 Study Region

Select the **Model type** for your simulation from the drop-down list.



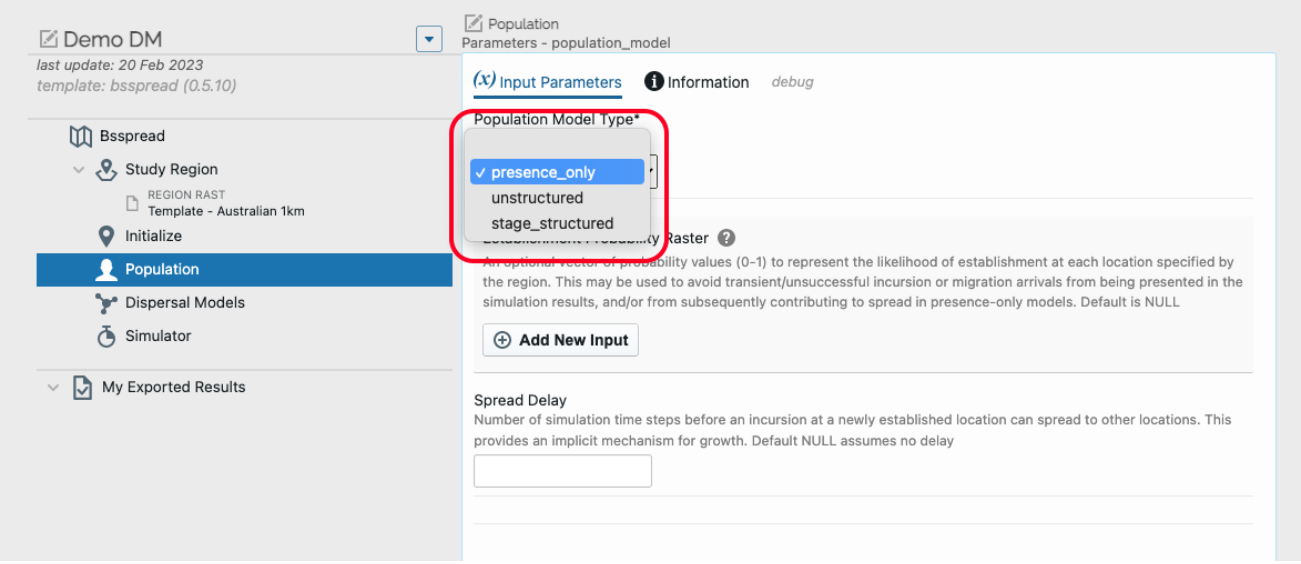
7.3 Initialize

Select how to initialize the simulation. Initial layer allows you to seed the model with discrete locations, while the random option allows the user to randomly seed the model and simulate incursions based on a probability layer.



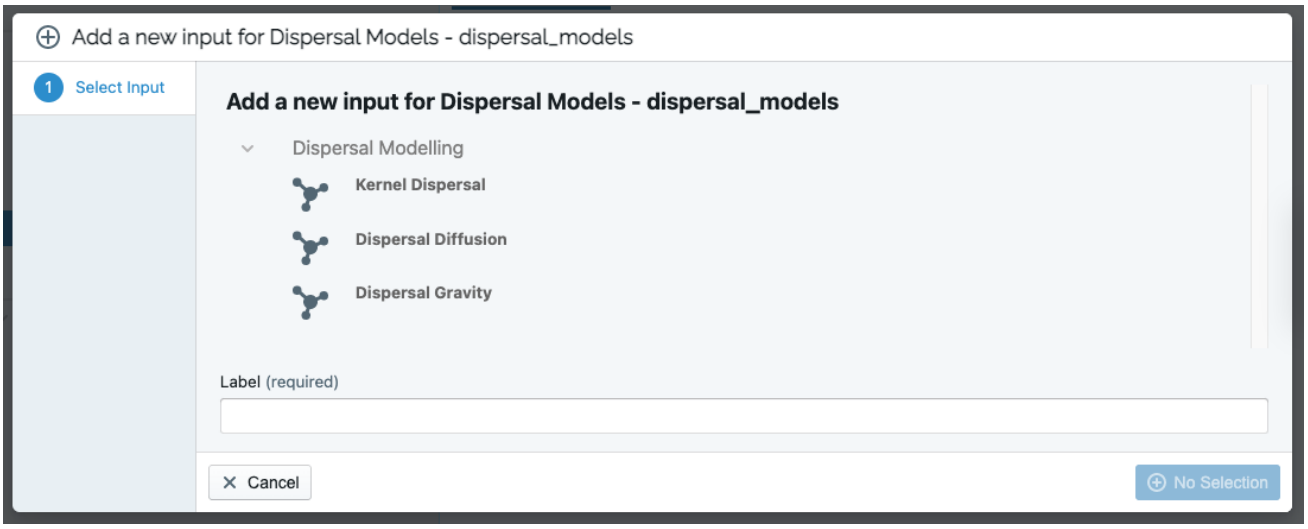
7.4 Population

Select the **Population Model Type** for the simulation.

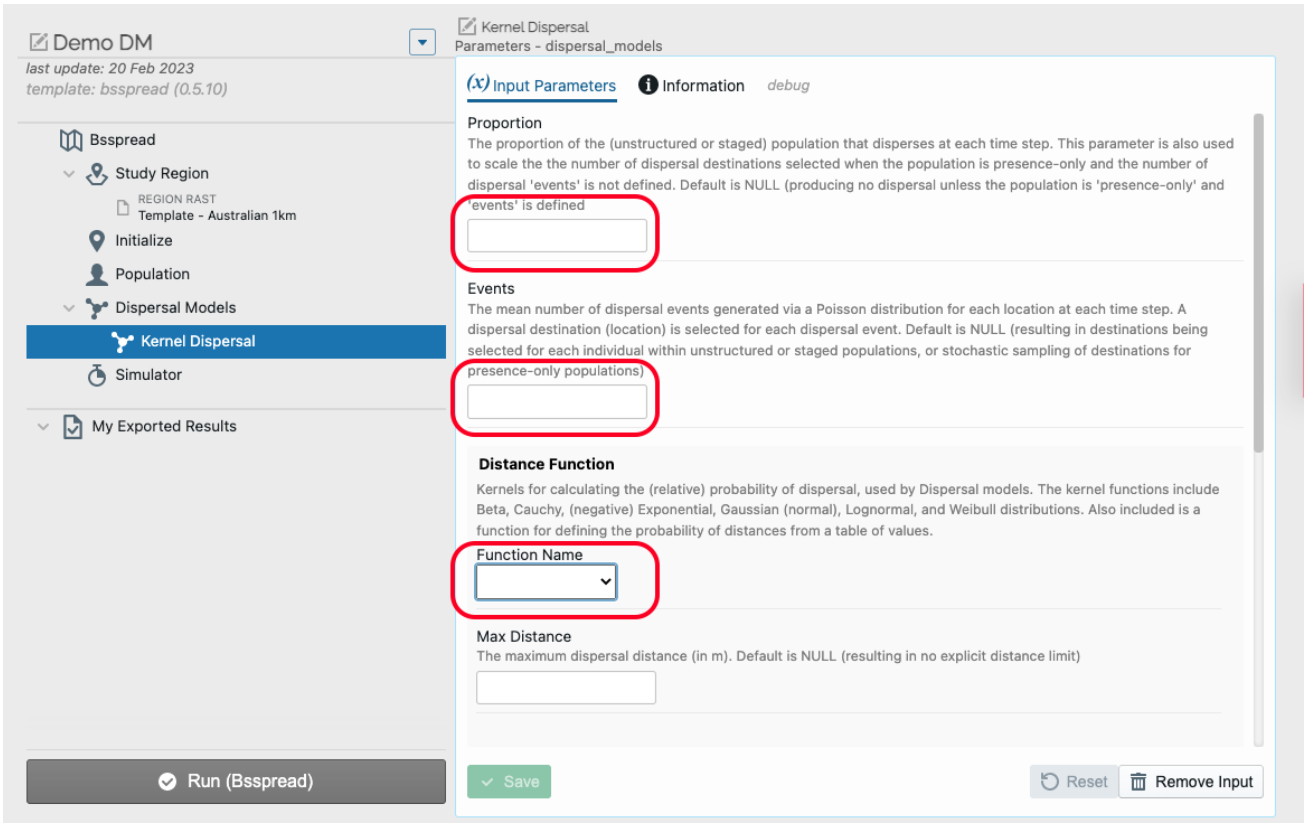


7.5 Dispersal Models

Select the **Dispersal Models** for the simulation. Note that one or more models may be selected to represent different vectors for spread.

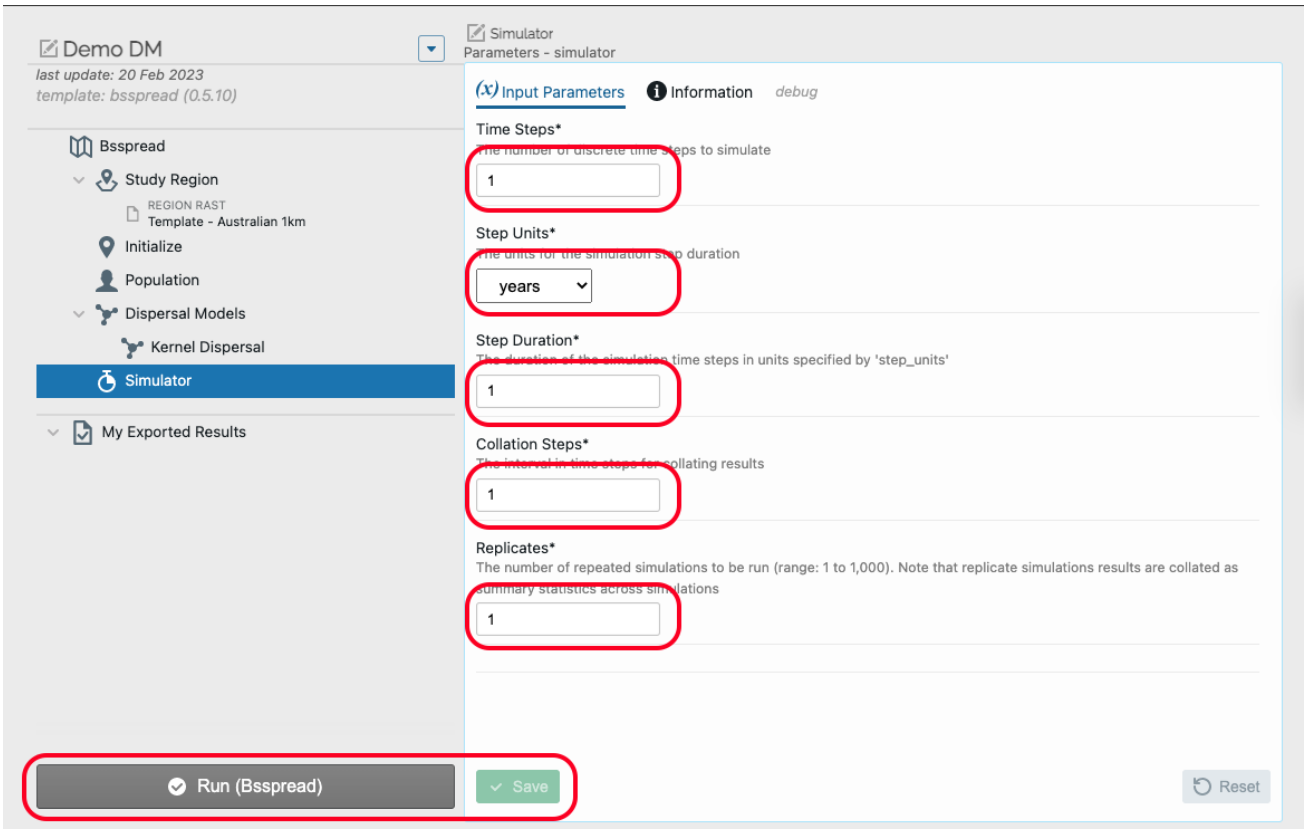


Enter the parameters for the selected dispersal.



7.6 Simulator

Enter the parameters controlling the execution of the simulation. After updating the parameters select **Save** and then **Run** the simulation to generate the results.

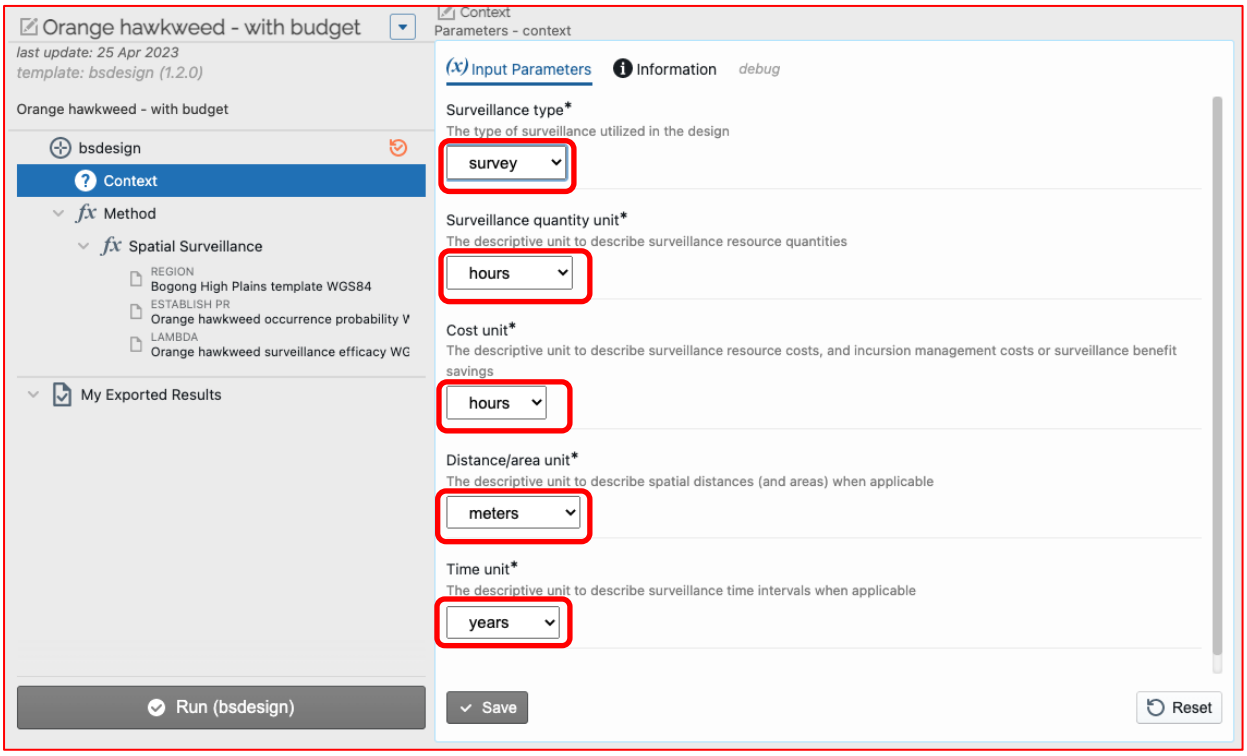


8 Surveillance Design

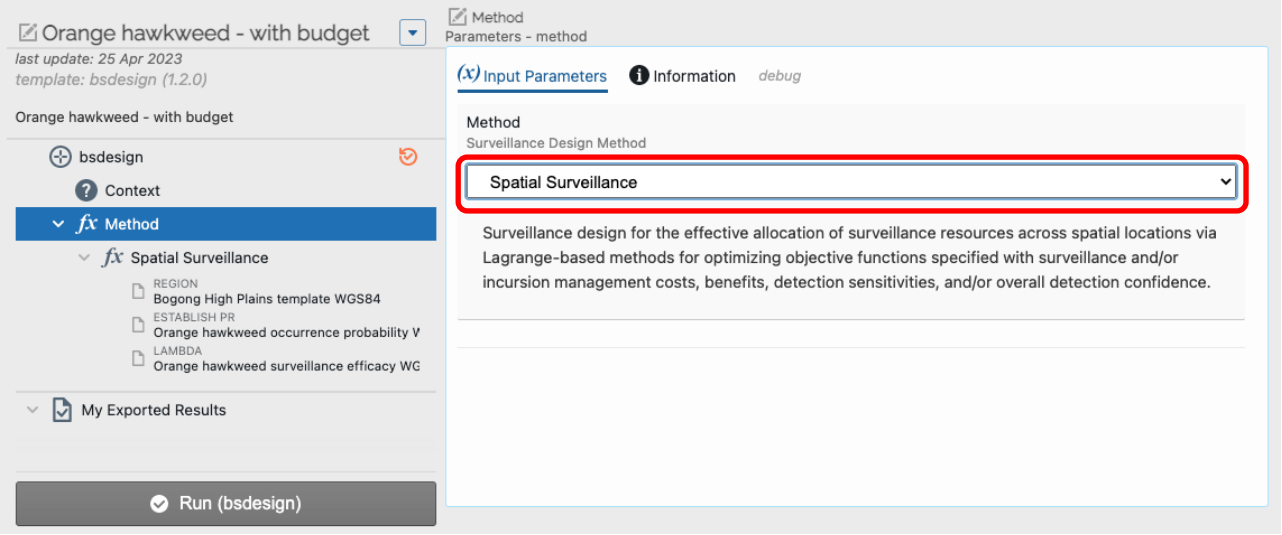
8.1 Introduction

This section provides a brief overview of the surveillance design workflow, for a detailed overview of the workflow please visit the Surveillance Design support article.

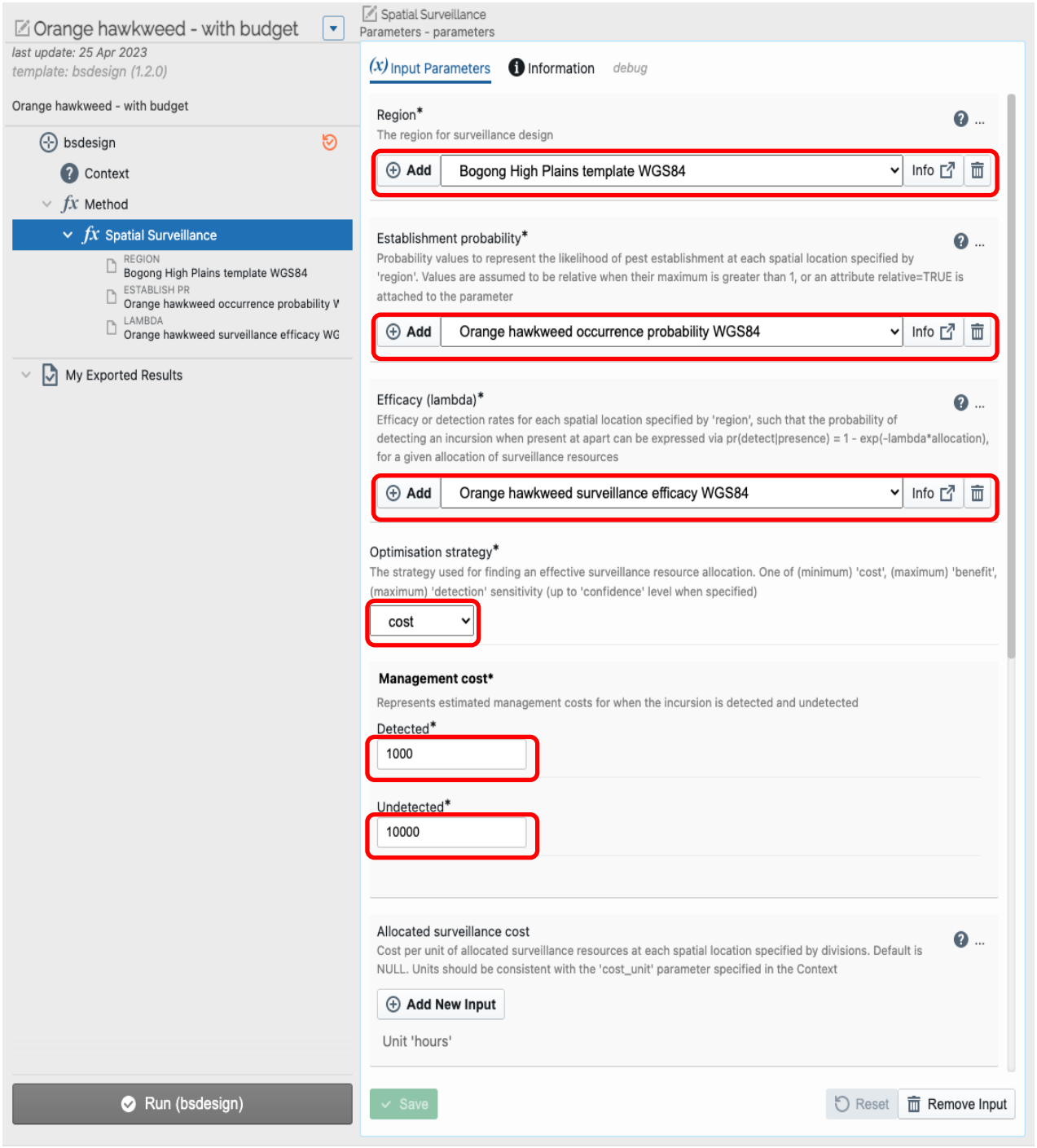
8.2 Define the context of the surveillance project



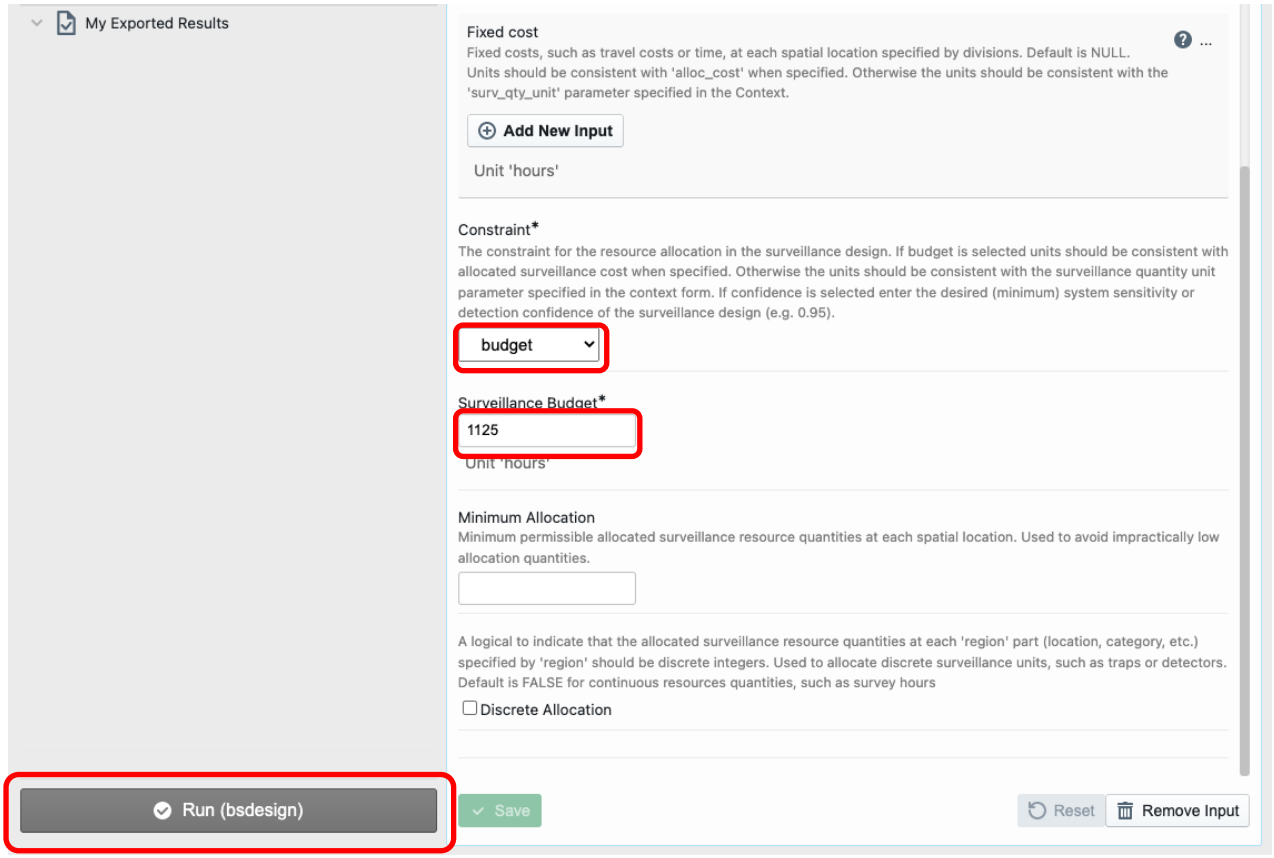
8.3 Select the surveillance design method



8.4 Provide inputs for the spatial surveillance optimisation problem



Provide inputs for the spatial surveillance optimisation problem (cont.)



Run when inputs are selected