Stony Coral Tissue Loss Disease (SCTLD) Research Data Portal

User Guide

This document provides an overview and guiding documentation for the Stony Coral Tissue Loss Disease (SCTLD) Research Data Portal. Please direct any questions to Tina Udouj (tina.udouj@MyFWC.com).

Overview

Corals in the Caribbean and Atlantic are suffering unprecedented damage from a multi-year outbreak of stony coral tissue loss disease (SCTLD), characterized by rapid tissue loss and high mortality rates in as many as 20 reef-building coral species. While the disease was first identified along Florida's Coral Reef in 2014, it has since spread to a total of 19 countries and territories throughout the Caribbean, including Puerto Rico and the U.S. Virgin Islands. To help protect reefs from the disease, a multi-faceted response effort has been undertaken by local, state, federal, academic, nonprofit, and individual partners that includes surveillance, intervention, restoration, communications, and research-related activities.

To better understand the extent of the disease, determine how it is being transmitted, and identify effective treatment options, surveillance, research, and intervention techniques have been prioritized as critical components of these response efforts. SCTLD research consists of many diverse activities, including field and lab research, sample collection, and the application of different experimental designs, all of which generate different types of data, which may be qualitative or quantitative and provide information regarding different coral species in various locations, varied habitat types, and different stages of the disease.

Many research activities have been executed by small independent teams approaching these components of SCTLD response independently, rather than as part of a highly integrated approach driven by shared objectives and goals. As a result, much of the information related to SCTLD research is diffuse. Cataloging and collating existing and new information into a searchable format is a critical step to enable a response synthesis and strategically advance insights on the etiology and epidemiology of SCTLD.

The SCTLD Research Data Portal < https://sctld.dataone.org/> will provide a searchable inventory of existing SCTLD information related to research, surveillance, and intervention activities conducted for susceptible species. The main landing page [Figure 1] provides a menu bar along the top and a search bar to enter your topic of interest.

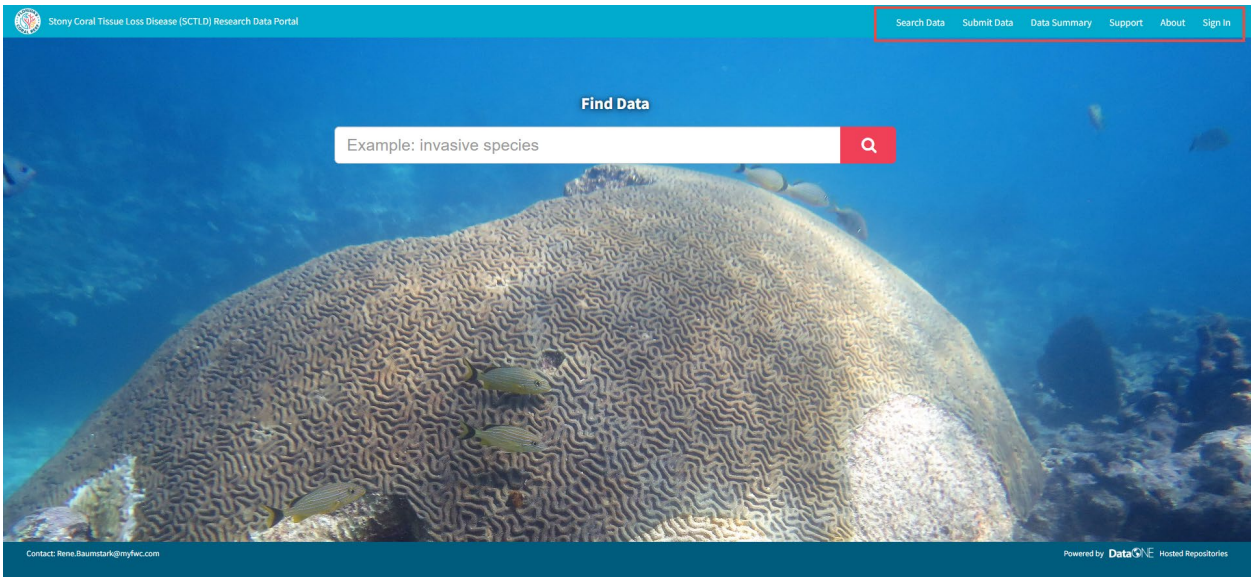

Figure 1. SCTLD Research Data Portal landing page

Search Data

The SCTLD Research Data Portal search data page (Figure 2) is made up of three sections - a search bar on the left, a dataset listing in the middle, and a map on the right. By default, you will see all public datasets on SCTLD Research Data Portal. If you wish to view your unpublished datasets or download data, click on the “Sign in with Orcid” button in the top right corner and login with your ORCID credentials.

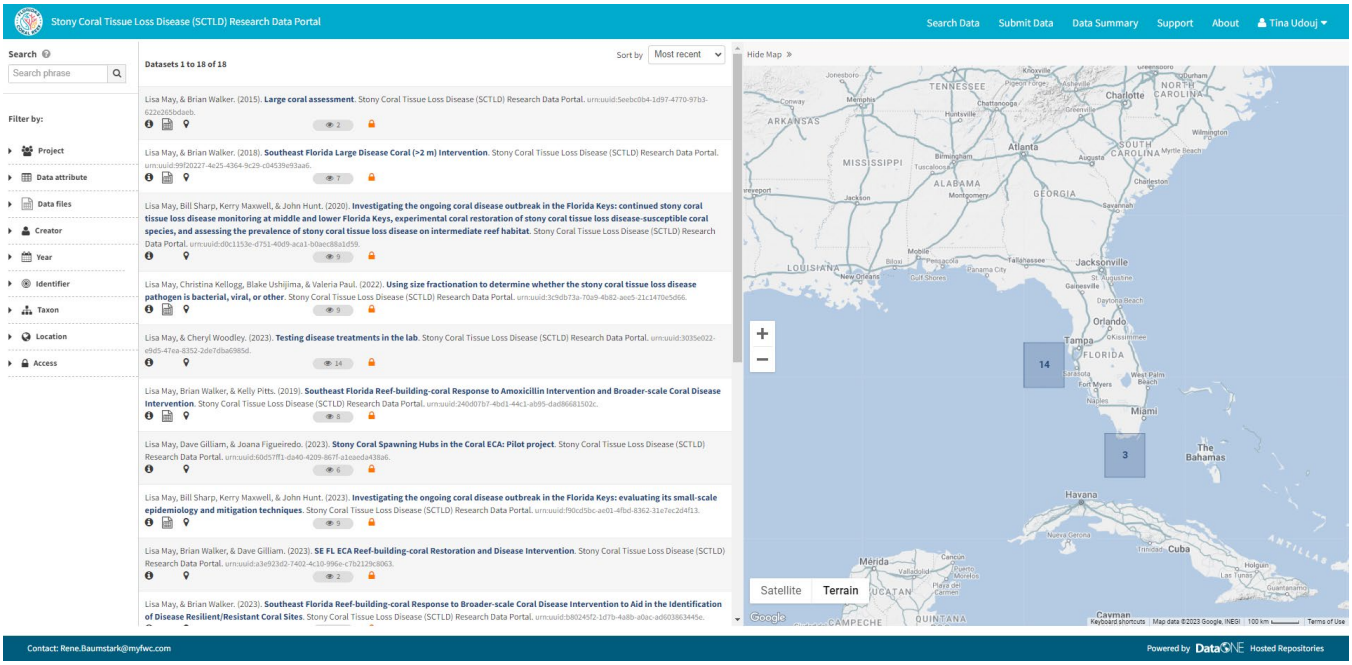

Figure 2. SCTLD Research Data Portal Search Data page

Previews of each dataset listed include citations in the format: **Authors (Publication Date): Dataset Title. Project. DOI** (Figure 3).

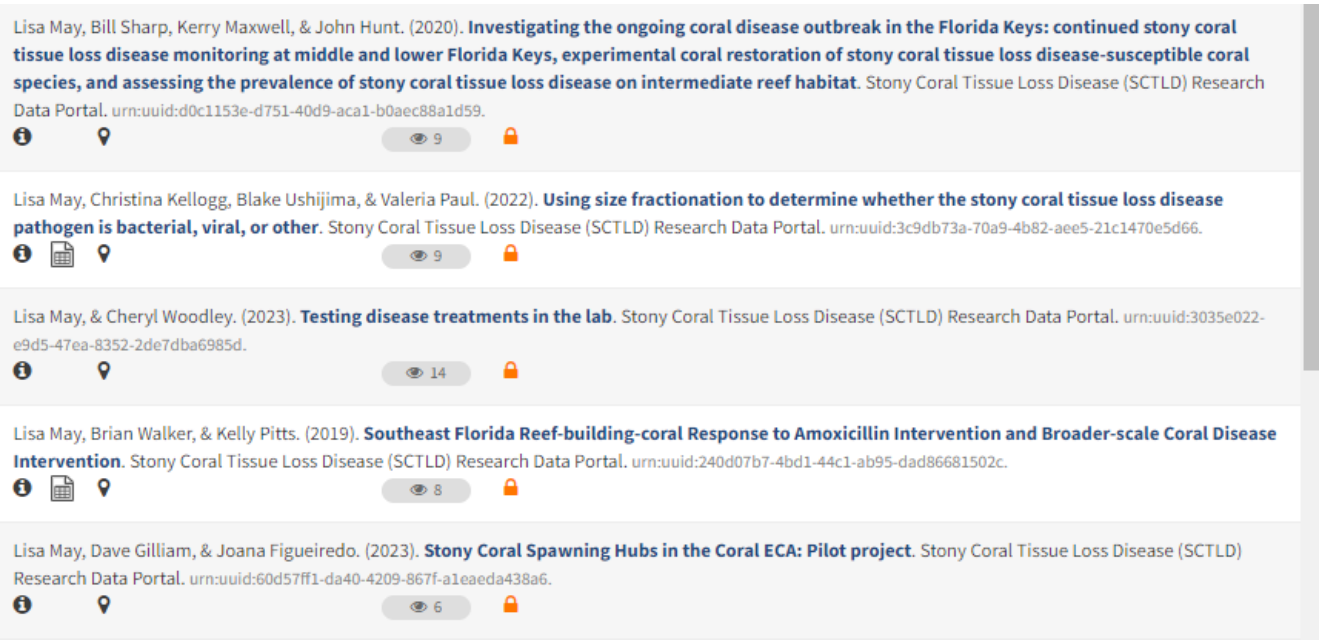

Figure 3. SCTLD Research Data Portal dataset previews with citations

There are various symbols that appear beneath the data citation (not all of them appear on all the datasets):

Icon	Meaning
 Orange lock	The record is unpublished, and only visible to you when you are logged in with your ORCID account. If the lock is not visible, the dataset is public and can be viewed and downloaded by anyone.
 Number with eye	This refers to the number of times this dataset has been viewed.
 i in circle (Info)	Displays a preview of the dataset abstract.

Paper with table (Files)	Indicates whether there are any data files associated with the dataset. If this icon is not visible, it means only metadata are available for the dataset.
Map marker	Refers to how many other datasets are associated with that location. Hovering over this icon will highlight the corresponding location on the map.

Data Search Tools

You can search for data using the options in the left sidebar (Figure 4). It will allow you to do a generic search for dataset attributes. (e.g. Title, keyword, PI name). You can also refine the search by using more specific fields - Identifier (e.g. DOI), Taxon, Location, Creator (authors), and Year (publication year or date range spanned in the dataset).

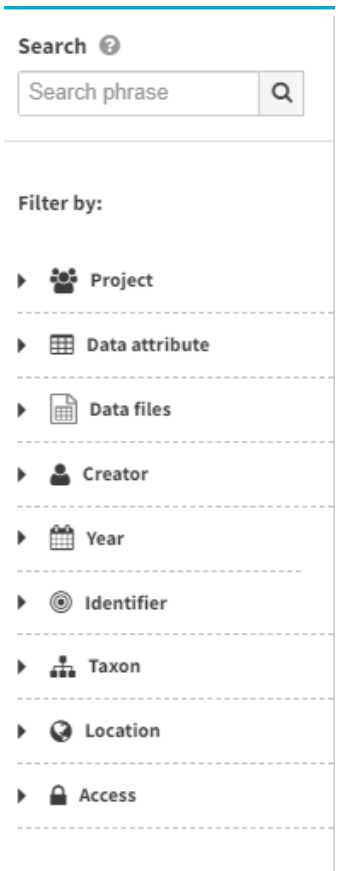

Figure 4. Search Options

Download Data

Public data files on the SCTLD Research Data Portal can be accessed by anyone through unique dataset landing pages, where they are accompanied by relevant metadata. There is no login requirement to download data.

Viewing Dataset Metadata

Once you have found a dataset using the search capabilities of the main data portal, click on the dataset title. This will display the dataset landing page, which is a page with the dataset citation at the top, a list of included data files, and accompanying metadata fields (Figure 5).

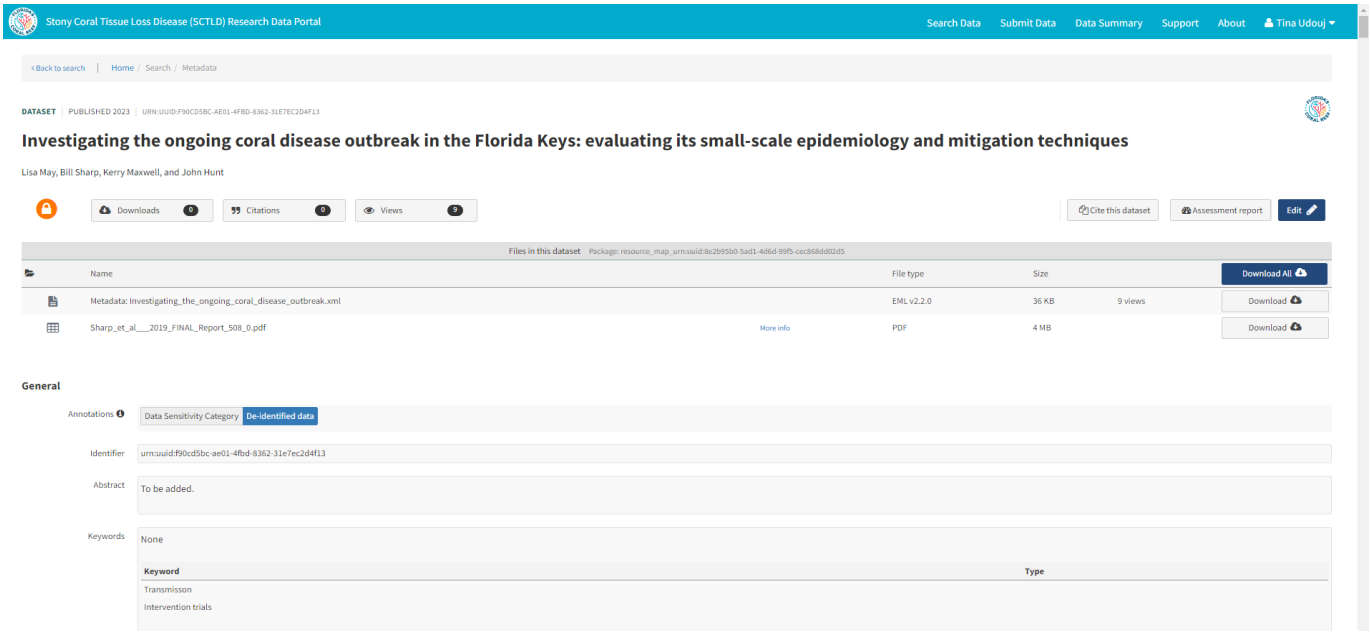

Figure 5. Dataset landing page with pdf file and accompanying metadata.

.

Metadata provides important information about the purpose for, and collection of the data included and helps to support data reuse. Scroll below the files section to view the metadata fields for the dataset.

Below are the metadata fields available on each landing page and their descriptions. Only fields that have been completed by the data contributor will appear on the landing page. For more information about the metadata fields required by the SCTLD Research Data Portal, please review our **Guidance Document**.

- **Identifier/Alternate Identifiers:** Identifiers in the SCTLD Research Data Portal or other systems for this dataset.
- **Abstract:** Brief description of the dataset.

- **Keywords and variables:** Categorical Keywords that indicate the general themes of this dataset, and data variables associated with the package.
- **People and Associated Parties:** Creators, Contact, and Contributors
- **Geographic Region:** Information about where the data were collected, along with a map view.
- **Temporal Coverage:** Date period the data spans.
- **Taxonomic Range:** Species associated with the research project.
- **Project Information:** Title, Personnel and Funding associated with the project.
- **Methods and Sampling:** Methods that were used to produce the data, including processing, QA/QC, site information etc.
- **Data Table, Image, and Other Data Details:** The details about the files uploaded, including files sources and derivations.
- **Usage Rights:** The usage rights under which this dataset is released. Anyone using the data must comply with the usage rights specified on the package.

Downloading Data Files

Data files are displayed in a table at the top of the dataset landing page, below the citation (Figure 6). Here you can view the name, file type, and size of each datafile and select which ones you would like to download. Alternatively, if there are many files, you can use the "Download All" button to download all files as a single zip file.

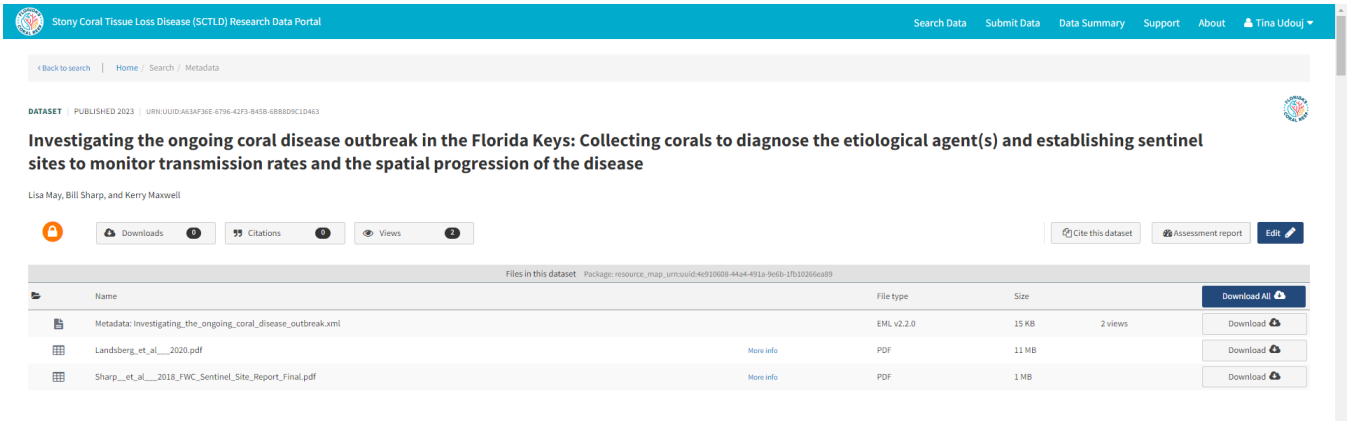

Figure 6. View of the data file table with options for downloading

Submit Data

Selecting “Submit Data” on the SCTLD Research Data Portal homepage will bring you to the Data Submission web form, where you can add your data files and complete associated metadata fields.

Please note that you will need an ORCID before submitting data. ORCID <https://orcid.org> provides a persistent digital identifier (ORCID iD) that you own and control, and that distinguishes you from every other researcher.

Project vs Dataset level metadata

Project Level Metadata: Project level metadata refers to the information that describes an entire project or study. It provides an overview and context for the datasets within the project.

Dataset Level Metadata: Dataset level metadata focuses on the characteristics and properties of individual datasets within a project. It provides detailed information about a specific dataset, enabling users to understand its content, structure, and usage.

A project level record can be created in DataOne, then individual datasets can be loaded into it, each with their own description and attribute/entity information.

Required Fields

Each field has a short description and an example. Fields that are required to submit your dataset are indicated with asterisks.

Overview*

- **Title*** A brief title between 7-20 words long which contains relevant information such as the topic, geographic location, dates, and scale of data.
- **Abstract*** The abstract should be at least 100 words in length, written in full sentences, and understandable to anyone who has not seen related manuscripts. Include a statement about the purpose for why these data were generated and the research question it is intended to answer. A good abstract would provide users with adequate information to determine if the data are useful for their needs.
- **Keywords** Add a minimum of three total keywords, choose from the list (**insert link for Keyword or PI document**> where possible. Ensure that these terms differ from words in the title to increase the findability of your dataset in searches.
- **Funding** List the organizations that funded the work
- **Publication Date** If you would like to specify a custom date or year when the dataset can be made publicly available, enter a date in YYYY-MM-DD or YYYY format. If left blank, this field will default to the current date.
- **Data Usage Rights*** Choose how you wish your data to be shared and reused. Usage rights for the metadata will always be Creative Commons Public Domain. Pick from one of the options.
- **Existing DOI(s) and Alternate Identifier(s)** If this dataset has been previously published elsewhere, enter the DOI or alternate identifier. Identifiers are used to locate the dataset within your project's data management system and can provide pertinent contextual information for users. Enter as many identifiers as needed.

People

- Dataset **Contact:** Single person who should be listed as the primary contact for the dataset for the purposes of the DOI or for users seeking further information about the data. This person may or may not be one of the dataset authors. A valid ORCID is required for the dataset contact.
- Dataset **Creators:** The main researchers involved in producing the data who should be **listed in the citation.** The order that creators are added to the dataset metadata will be the order that they appear in the dataset citation. Creators may be dataset authors, owners, originators, or principal investigators. Valid ORCIDs are strongly recommended for dataset creators.
- Dataset **Contributors:** Any additional contributors involved in producing the data. These may include people who assisted in creating the dataset but should not be considered authors for publication. Dataset contributors will not be included in the dataset citation. Valid ORCIDs are recommended, but not required, for dataset contributors.

Dates*

- **Start Date:** Enter the earliest date in your dataset in ISO format (YYYY-MM-DD)
- **End Date:** Enter the last date in your dataset in ISO format (YYYY-MM-DD)

Locations*

- **Description** Include a short description of the location(s) where data was collected. This may include the location name, known identifiers if associated with a specific project, and ecosystem type involved.
- **Bounding Box Coordinates:** Enter two Latitude, Longitude coordinates to specify a geographic bounding box or only one Latitude, Longitude pair for a single point**.**
- For lab-based studies or studies without discrete sampling sites: a generic Florida descriptor can be used: -87.6347, 24.514909; -80.032576, 31.000809

Taxa

- **General Taxonomic Coverage:** How you identified the range of taxa addressed in this dataset
- **Taxonomic Classification(s):** Drop down menu to select one or more common taxa for coral species and symbionts.

Methods

- Information about the methods employed in collecting or generating the data included in your dataset. The dataset methods should be thorough enough for your work to be reproduced. You may provide a citation for any related methods used that have been previously published, but we recommend still including methods text in your dataset metadata that fully describe data collection and processing steps.

Once you have completed the minimum required fields in the dataset submission form, save your dataset to the SCTLD Research Data Portal. The “Save Dataset” button does not make your dataset public or move it into the review process.

Assessment Reports

After saving your dataset, the "Assessment Report" button will become available. This report [Figure 7] includes the results of a set of automated quality checks that help make your dataset findable, accessible, interoperable, and reusable. These checks evaluate the presence of key fields, determine file types, and check that URLs included in metadata are resolvable.

Automated checks begin once a dataset is submitted and failed checks should be addressed by the dataset submitter before requesting publication. If you need any assistance on addressing the failed checks, please reach out to Lisa.May@noaa.gov or Tina.Udouj@myfwc.com.

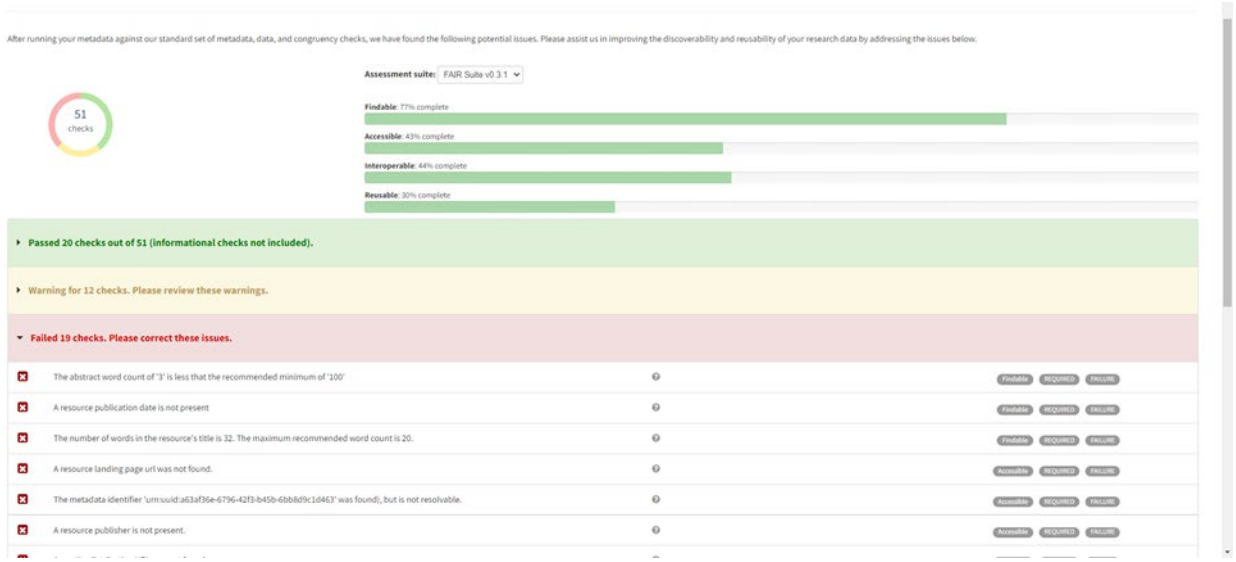

Figure 7. Example assessment report for the SCTLD Research Data Portal

Data Summary

The Data Summary page [Figure 8] provides the following information about the data packages within the SCTLD Research Data Portal:

- The total number of publicly available metadata records
- The volume (in bytes) of all publicly available metadata records and data files
- The most recent date the datasets were last updated (metadata and data are treated separately)
- The file types of all publicly available data
- The years in which data was collected, regardless of upload date

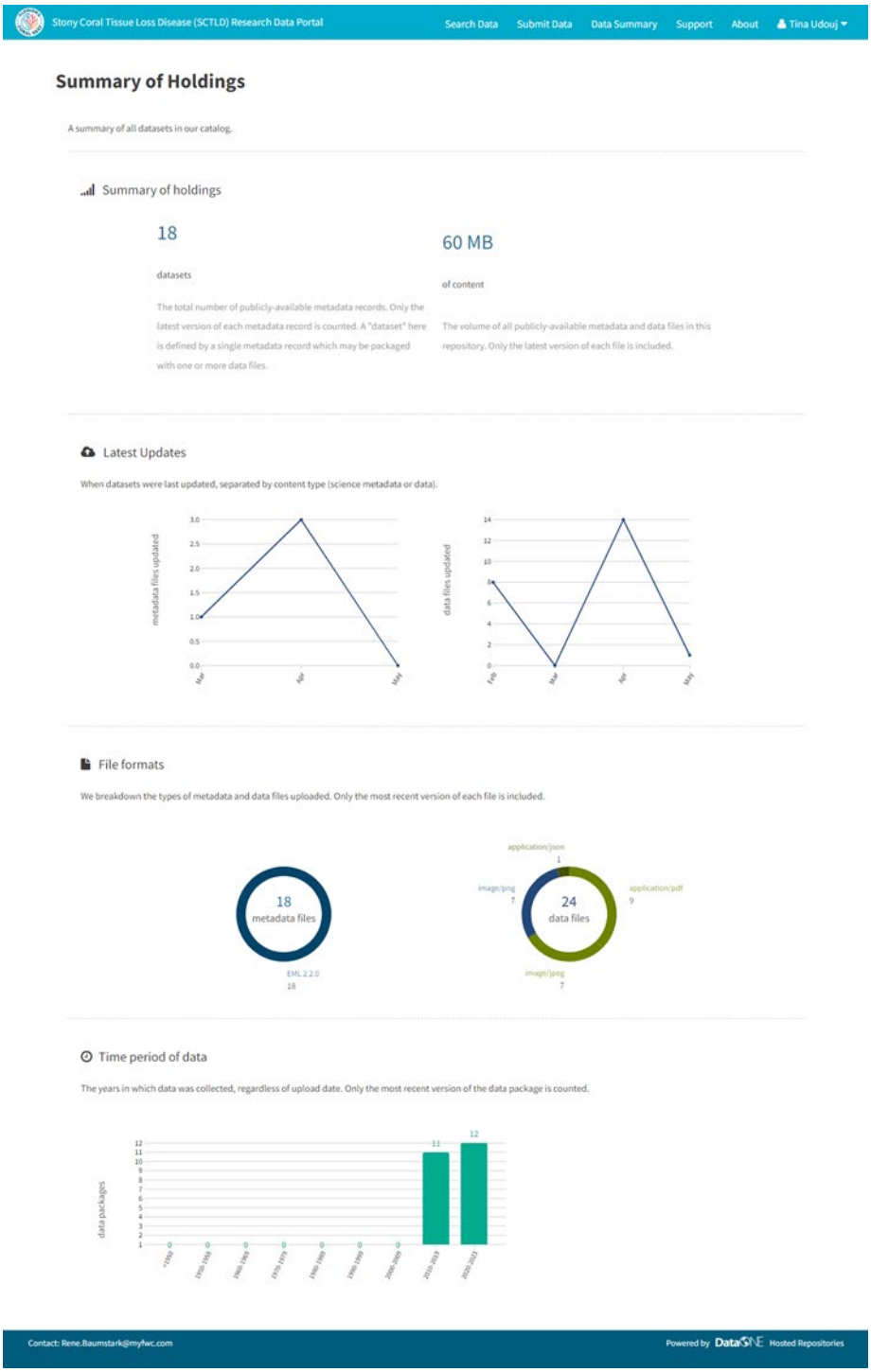

Figure 8. SCTLD Research Data Portal Data Summary page

Support

The Support page [Figure 9] provides guidelines to assist with submission of data packages to the SCTLD Research Data Portal. Review this page to learn more about how the portal works and recommended best practices.

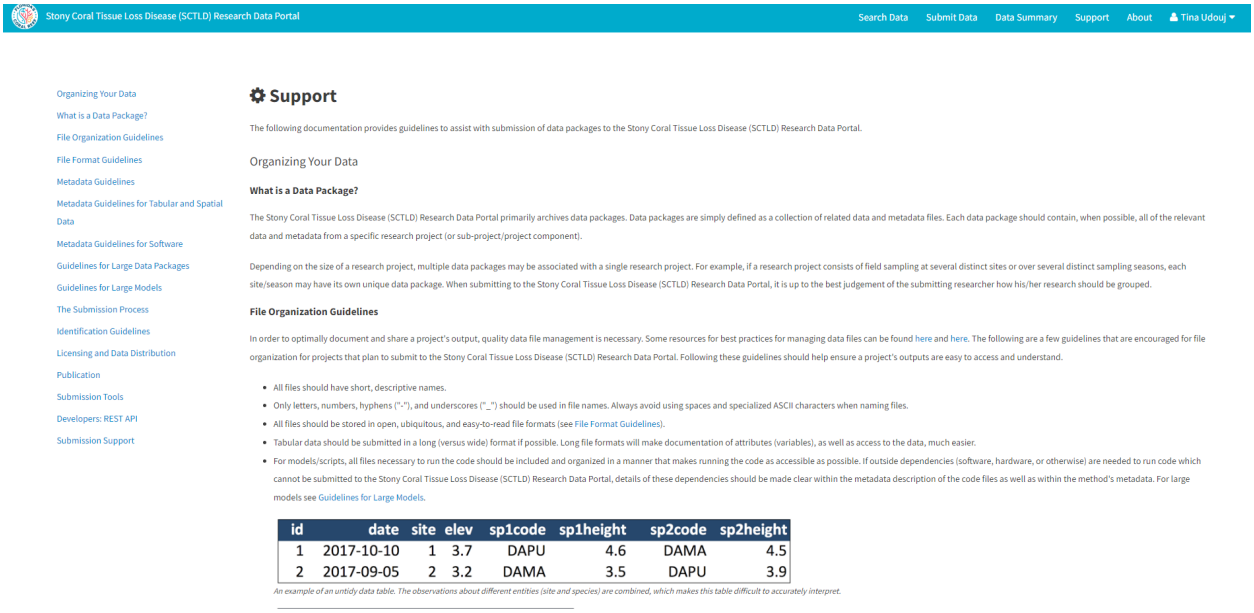

Figure 9. SCTLD Research Data Portal Support page

About

The About page [Figure 10] of the SCTLD Research Data Portal provides a brief overview of the disease and key factors of the outbreak.

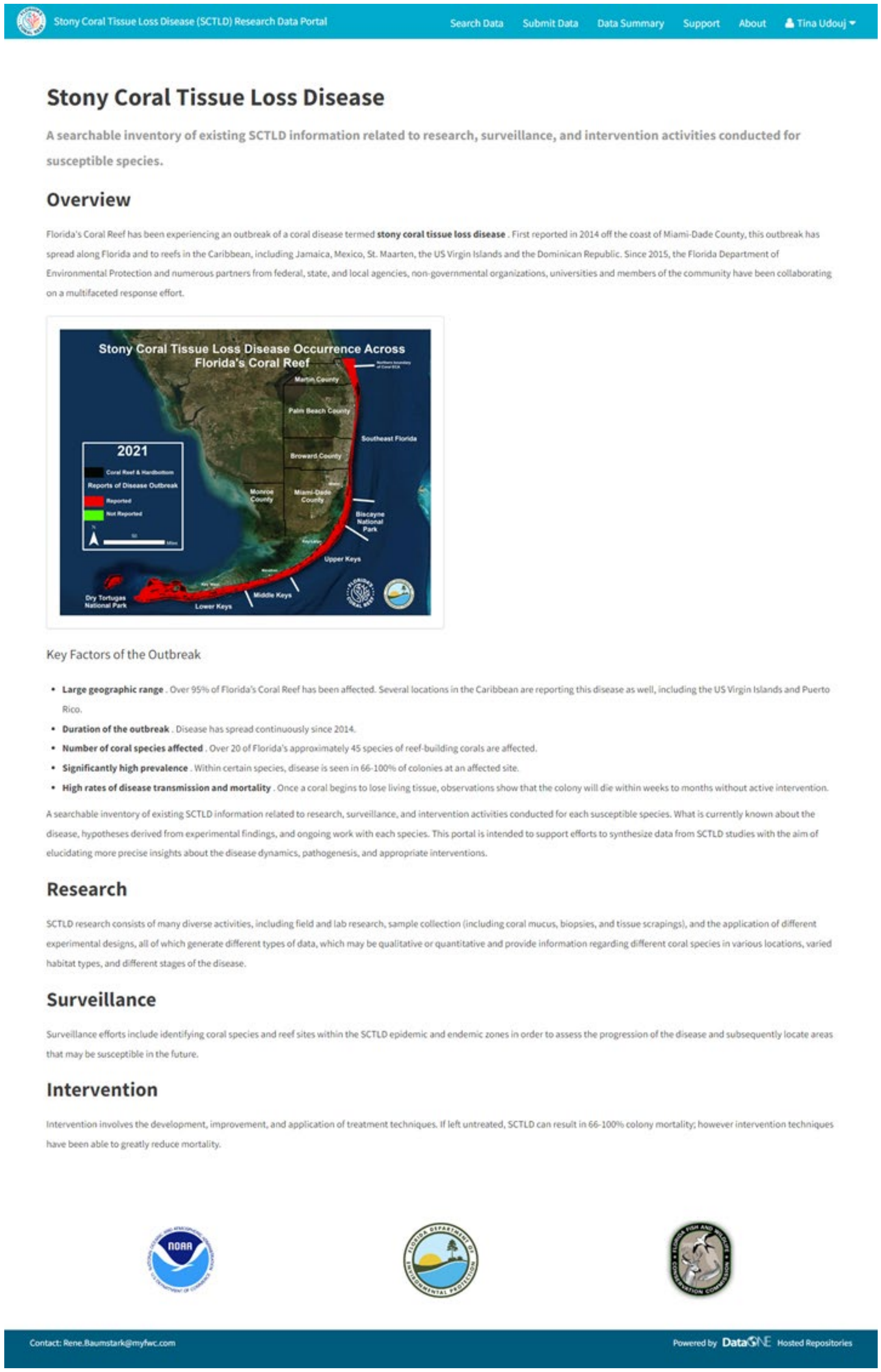

Figure 10. SCTLD Research Data Portal About Page