Submerged Aquatic Vegetation Indicator Quantile Report
SEACAR Analysis

Last compiled on 21 January, 2025

Contents

Overview

Purpose

The purpose of the indicator quantiles is to flag records that are "unusual" relative to all of the data in the DDI for a given indicator in order to facilitate QA/QC. They are not used to filter any of the data for SEACAR analyses, and the presence of a LowerQuantile or UpperQuantile flag on a DDI record alone does not necessarily indicate there is any issue with the record (neither does the absence of a LowerQuantile or UpperQuantile flag necessarily mean that a data record is correct).

Relevant file locations

Current values can be found in the "LowQuantile" and "HighQuantile" columns of the "Ref_Parameters" worksheet.

The R script described below and the output file can be found in the *FloridaSEACAR IndicatorQuantiles* repository on GitHub:

- https://github.com/FloridaSEACAR/IndicatorQuantiles

Process steps

IQ_Report_Render.R & IQ_Report.Rmd

1. The *IQ_Report_Render.R* script lists all files in a given directory and filters it to a list of DDI exports to evaluate considering a list of parameters to skip (user-defined).

2. User sets the desired upper and lower quantile thresholds, as well as a number of standard deviations away from the mean to use for the calculations.

3. User sets the string value(s) in the DDI exports that should be considered as NA values.

4. The remainder of the script loops through the file list, returning the values listed below and binding them together by row into a single Excel spreadsheet that is saved to the User's working directory.

5. For each habitat included in the User's working directory a PDF report will be created in the "output" folder using *IQ_Report.Rmd*, which provides an overview of questionable / flagged values.

6. In addition to the PDF reports, each habitat will provide a .txt data output file in the "output/data" folder containing questionable values.

Summary

The following quantile thresholds are used for flagging "questionable" values:

- Lower quantile: **0.001**
- Upper quantile: **0.999**

Included Indicators and Parameters and the files used in this analysis:

All_SAV_Parameters-2024-Dec-08.txt

Indicator: Percent Cover

- Braun Blanquet Score

- Modified Braun Blanquet Score

- Percent Cover

- Percent Occurrence

- Presence/Absence

- Shoot Count

Summary Tables

q_low: Value corresponding to the qval_low quantile for the parameter in the DDI export.

q_high: Value corresponding to the qval_high quantile for the parameter in the DDI export.

mean: Mean value for the parameter in the DDI export.

n_tot: Total number of records in the DDI export for the parameter.

n_q_low: Number of records in the DDI export that are below q_low for the parameter.

n_q_high: Number of records in the DDI export that are above q_high for the parameter.

pct_flagged: Proportion of total records in the DDI export for the parameter which have been flagged as above q_high, or below q_low.

Indicator: **Percent Cover**

Table 1: Indicator Quantile Overview

ParameterName	q low	q high	mean	n tot	n q low	n q high	pct flagged
Braun Blanquet Score	0	5	0.36	1137345	1	4	0.00
Modified Braun Blanquet Score	0	5	1.97	51649	0	1	0.00
Percent Cover	0	100	4.50	532568	0	44	0.01
Percent Cover	0	100	4.81	456537	0	43	0.01
Percent Occurrence	0	100	10.30	623477	0	2	0.00
Percent Occurrence	0	100	10.83	507954	0	2	0.00
Presence/Absence	0	1	0.24	1876501	0	0	0.00

Low Quantile

Indicator: Percent Cover

Braun Blanquet Score

Table 2: Flagged Values - Low Indicator Quantile: **0**

RowID	ProgramID	ProgramLocationID	SampleDate	CommonIdentifier	ResultValue
65329	296	276	2020-12-13	Thalassia testudinum	-0.69

Programs containing flagged data:

296 - Florida Keys National Marine Sanctuary Seagrass Monitoring Project

There are no *Low* Quantile Flagged Values for Modified Braun Blanquet Score

There are no *Low* Quantile Flagged Values for Percent Cover

There are no *Low* Quantile Flagged Values for Percent Occurrence

There are no *Low* Quantile Flagged Values for Presence/Absence

There are no *Low* Quantile Flagged Values for Shoot Count

High Quantile

Indicator: Percent Cover

Braun Blanquet Score

Table 3: Flagged Values - High Indicator Quantile: **5**

RowID	ProgramID	ProgramLocationID	SampleDate	CommonIdentifier	ResultValue
4056652	4018	13M	2018-07-19	Anadyomene stellata	15
4056701	4018	13M	2018-07-19	Anadyomene stellata	7
4056752	4018	13M	2018-07-19	Anadyomene stellata	10
4056831	4018	9P	2018-07-23	Anadyomene stellata	6

Programs containing flagged data:

4018 - Miami-Dade County DERM Benthic Habitat Monitoring Program

Modified Braun Blanquet Score

Table 4: Flagged Values - High Indicator Quantile: **5**

RowID	ProgramID	ProgramLocationID	SampleDate	CommonIdentifier	ResultValue
618783	559	KB06-2016	2016-06-30	Laurencia spp.	5.3

Programs containing flagged data:

559 - Northern Big Bend Seagrass Monitoring

Percent Cover

Table 5: Flagged Values - High Indicator Quantile: **100**

RowID	ProgramID	ProgramLocationID	SampleDate	CommonIdentifier	ResultValue
603596	564	W1-06-12	2012-09-26	Total SAV	105
586814	564	W1-12-11	2011-10-05	Total SAV	105
620927	564	W1-16-17	2017-10-06	Total SAV	101
586509	564	W1-17-11	2011-09-30	Total SAV	105
609715	564	W1-18-14	2014-10-10	Total SAV	101
621532	564	W1-22-19	2019-11-10	Total SAV	150
621552	564	W1-22-19	2019-11-10	Total SAV	104
586407	564	W1-23-11	2011-10-03	Total SAV	101
586395	564	W1-24-11	2011-10-05	Total SAV	105
609761	564	W1-25-15	2015-10-02	Total SAV	105
603343	564	W1-26-12	2012-09-26	Total SAV	101
586644	564	W1-27-11	2011-10-04	Total SAV	101
586759	564	W1-27-11	2011-10-04	Total SAV	140
603136	564	W1-28-12	2012-09-26	Total SAV	105
603232	564	W1-28-12	2012-09-26	Total SAV	105
621623	564	W1-28-19	2019-12-31	Total SAV	101
609916	564	W1-31-15	2015-10-07	Total SAV	110
609917	564	W1-31-15	2015-10-07	Total SAV	110
609922	564	W1-31-15	2015-10-07	Total SAV	110
621609	564	W1-31-19	2019-12-31	Total SAV	180
609882	564	W1-34-15	2015-10-02	Total SAV	125
621610	564	W1-35-19	2019-12-31	Total SAV	105
621641	564	W1-35-19	2019-12-31	Total SAV	110
621648	564	W1-35-19	2019-12-31	Total SAV	105
621760	564	W1-35-19	2019-12-31	Total SAV	105
621761	564	W1-35-19	2019-12-31	Total SAV	105
621909	564	W1-35-19	2019-12-31	Total SAV	110
622019	564	W1-40-19	2019-12-31	Total SAV	120
603502	564	W2-01-12	2012-09-14	Total SAV	105
603682	564	W2-04-11	2011-09-29	Total SAV	120
603493	564	W2-04-12	2012-09-13	Total SAV	140
609996	564	W2-04-15	2015-10-21	Total SAV	120
621407	564	W2-2-19	2019-03-10	Total SAV	130
621438	564	W2-2-19	2019-03-10	Total SAV	110
621298	564	W2-5-19	2019-12-31	Total SAV	180
621334	564	W2-5-19	2019-12-31	Total SAV	120
621384	564	W2-9-19	2019-03-10	Total SAV	122
620869	564	W2-ALT-01-17	2017-09-29	Total SAV	105
609810	564	W3-03-15	2015-10-05	Total SAV	125
609821	564	W3-03-15	2015-10-05	Total SAV	106
609827	564	W3-03-15	2015-10-05	Total SAV	110
609886	564	W3-03-15	2015-10-05	Total SAV	115
609910	564	W3-03-15	2015-10-05	Total SAV	135

Programs containing flagged data:

564 - Western Pinellas County Seagrass Monitoring

Percent Occurrence

Table 6: Flagged Values - High Indicator Quantile: **100**

RowID	ProgramID	ProgramLocationID	SampleDate	CommonIdentifier	ResultValue
2275131	3013	IRLSG045	2021-08-12 09:15:00	Total seagrass	161
2278217	3013	IRLSG045	2021-08-12 09:15:00	Total seagrass	139

Programs containing flagged data:

3013 - Seagrass (SJRWMD)

There are no *High* Quantile Flagged Values for Presence/Absence

There are no *High* Quantile Flagged Values for Shoot Count