

## H2O QC Report: CNMI 2014

The file used in this QC routine is: ESD\_NCRMP\_H2O\_2014\_CNMI.csv

QC run at: 2021-03-31 15:34:39 HST

Number of samples in data file: 106

### Check the data ranges

Fields with NA values for min and max do not contain any data for this data set.

	Min	Max
LATITUDE_DEC	13.23109	20.54501
LONGITUDE_DEC	144.6259	145.8330
TIMESTAMP_UTC	2014-03-24 23:01:00	2014-05-05 23:57:00
YEAR_UTC	2014	2014
MONTH_UTC	3	5
DAY_UTC	2	31
TIME_UTC	00:05:00	23:57:00
YEARDAY_UTC	83.96	126.00
DEPTH_METER	0.9	17.4
PRESSURE_DB_CTD	1.006	17.101
PRESSURE_DB_CALCULATED	NA	NA
TEMPERATURE_ITS90_CTD	24.0651	29.1087
TEMPERATURE_ITS90_SCS	NA	NA
TEMPERATURE_ITS90_BEST	24.0651	29.1087
SALINITY_PSS78_CTD	33.6505	35.1742
SALINITY_PSS78_BOTTLE	NA	NA
SALINITY_PSS78_SCS	NA	NA
SALINITY_PSS78_BEST	33.6505	35.1742
DIC_UMOL_KG	1904.9	2018.4
TALK_UMOL_KG	2237.0	2308.5
PH_TS_CALCULATED	7.992918	8.092850
PCO2_UATM_CALCULATED	350.5689	445.9090
ARAGONITE_SAT	3.280191	3.911443

Check the missions, dates, and number of samples associated with each island.

LOCATIONCODE	CRUISE_ID	EXPOCODE	NO.SAMPLES	TIMESTAMP_UTC.range
AGU	HA1401	33HL20140320	1	2014-04-08 00:05:00, 2014-04-08 00:05:00
ALA	HA1401	33HL20140320	1	2014-05-02 03:07:00, 2014-05-02 03:07:00
ASC	HA1401	33HL20140320	7	2014-04-23 22:19:00, 2014-04-25 01:15:00
FDP	HA1401	33HL20140320	1	2014-04-26 01:54:00, 2014-04-26 01:54:00

(continued)

LOCATIONCODE	CRUISE_ID	EXPOCODE	NO.SAMPLES	TIMESTAMP__UTC.range
GUA	HA1401	33HL20140320	26	2014-03-24 23:01:00, 2014-04-04 02:59:00
GUG	HA1401	33HL20140320	1	2014-05-05 23:57:00, 2014-05-05 23:57:00
MAU	HA1401	33HL20140320	17	2014-04-28 00:47:00, 2014-05-05 03:25:00
PAG	HA1401	33HL20140320	21	2014-04-19 22:17:00, 2014-04-23 05:45:00
ROT	HA1401	33HL20140320	6	2014-04-04 23:36:00, 2014-04-07 00:26:00
SAI	HA1401	33HL20140320	17	2014-04-10 22:56:00, 2014-04-18 01:01:00
SAR	HA1401	33HL20140320	2	2014-04-19 01:06:00, 2014-04-19 03:05:00
TIN	HA1401	33HL20140320	6	2014-04-08 22:46:00, 2014-04-10 04:48:00

## Check for NULLs in all metadata fields

“No” signifies that no NULL data exist. “Yes” signifies that NULL values are present.

	Contains NULLs?
EXPOCODE	No
CRUISE_ID	No
STATION_ID	No
CAST_NUMBER	No
SAMPLE_ID	No
YEAR__UTC	No
MONTH__UTC	No
DAY__UTC	No
TIME__UTC	No
YEARDAY__UTC	No
LATITUDE_DEC	No
LONGITUDE_DEC	No
DEPTH_METER	No
CTDCASTID_ESD	No
ASSOC_OCC_SITEID	Yes
REGION	No
REGIONCODE	No
LOCATION	No
LOCATIONCODE	No
SURVEY_DESIGN	No
SAMPLE_FREQUENCY	No
TEMPERATURE_ITS90_BEST_ORIGIN	No
SALINITY_PSS78_BEST_ORIGIN	Yes
TIMESTAMP__UTC	No

## Check for NULLs in all data fields

“No” signifies that no NULL data exist. “Yes” signifies that NULL values are present. NULL values may be present in TA or DIC if the sample was unable to be analyzed for either parameter, or in any of the temperature or salinity fields if these variables were not measured using the method specified in the field name. Any sample missing TA and/or DIC will not have values for pH, pCO<sub>2</sub>, and ARAGONITE\_SAT.

	Contains NULLs?
PRESSURE_DB_CTD	No
PRESSURE_DB_CALCULATED	Yes
TEMPERATURE_ITS90_CTD	No
TEMPERATURE_ITS90_CTD_FLAG	No
TEMPERATURE_ITS90_SCS	Yes
SALINITY_PSS78_CTD	Yes
SALINITY_PSS78_CTD_FLAG	Yes
SALINITY_PSS78_BOTTLE	Yes
SALINITY_PSS78_BOTTLE_FLAG	Yes
SALINITY_PSS78_SCS	Yes
DIC_UMOL_KG	Yes
DIC_UMOL_KG_FLAG	No
TALK_UMOL_KG	Yes
TALK_UMOL_KG_FLAG	No
TEMPERATURE_ITS90_BEST	No
SALINITY_PSS78_BEST	Yes
PH_TS_CALCULATED	Yes
PCO2_UATM_CALCULATED	Yes
ARAGONITE_SAT	Yes

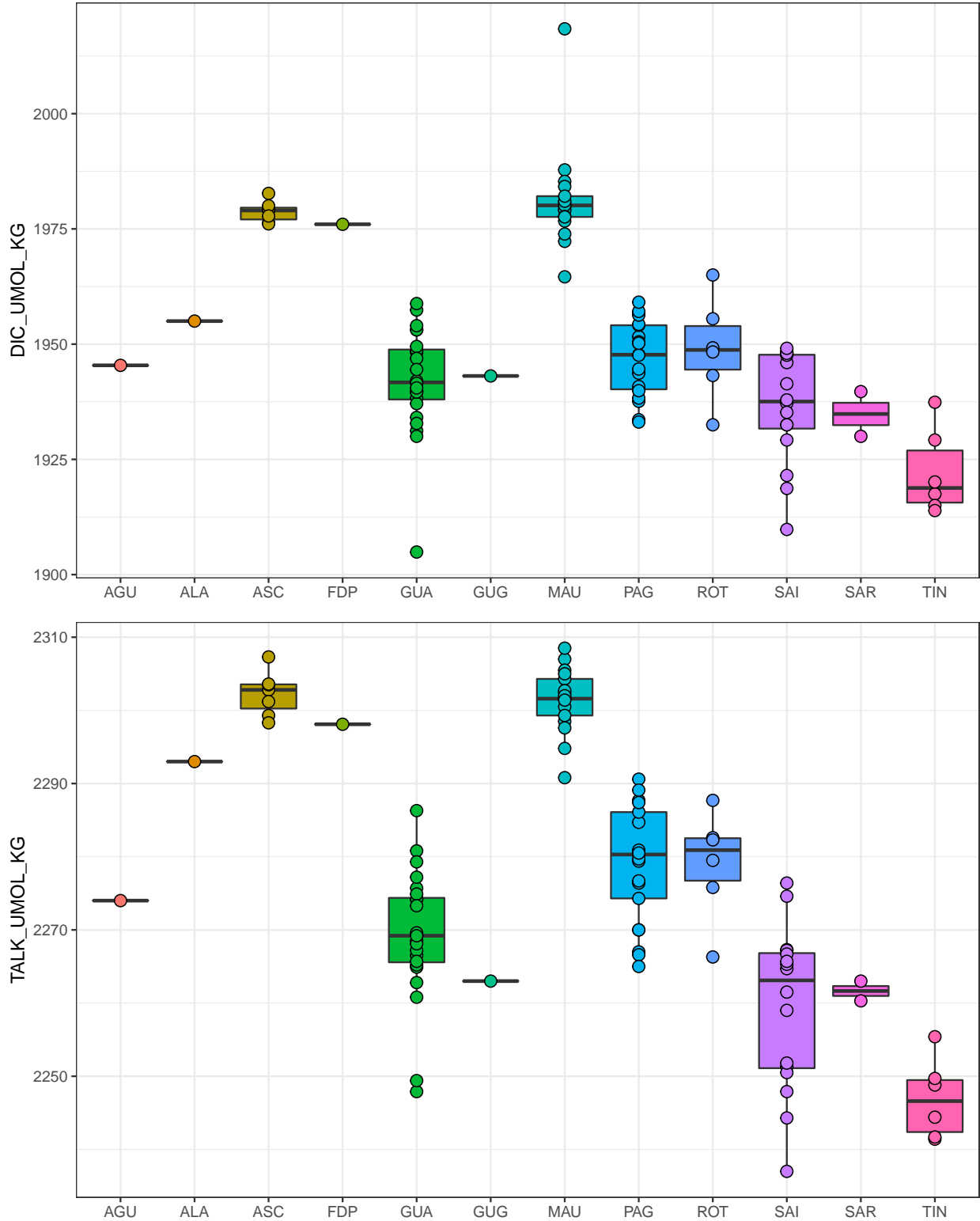
[1] “The following samples are missing TA, pH, pCO<sub>2</sub>, and Aragonite\_Sat values:”

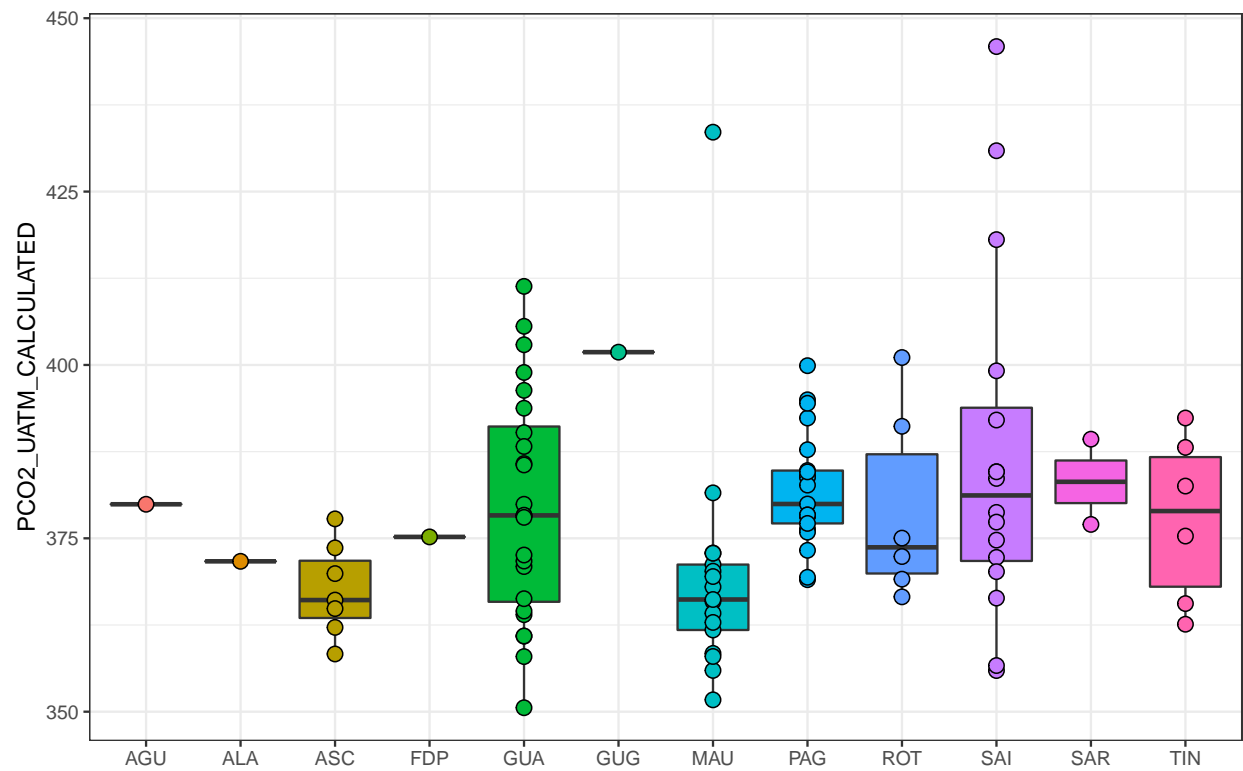
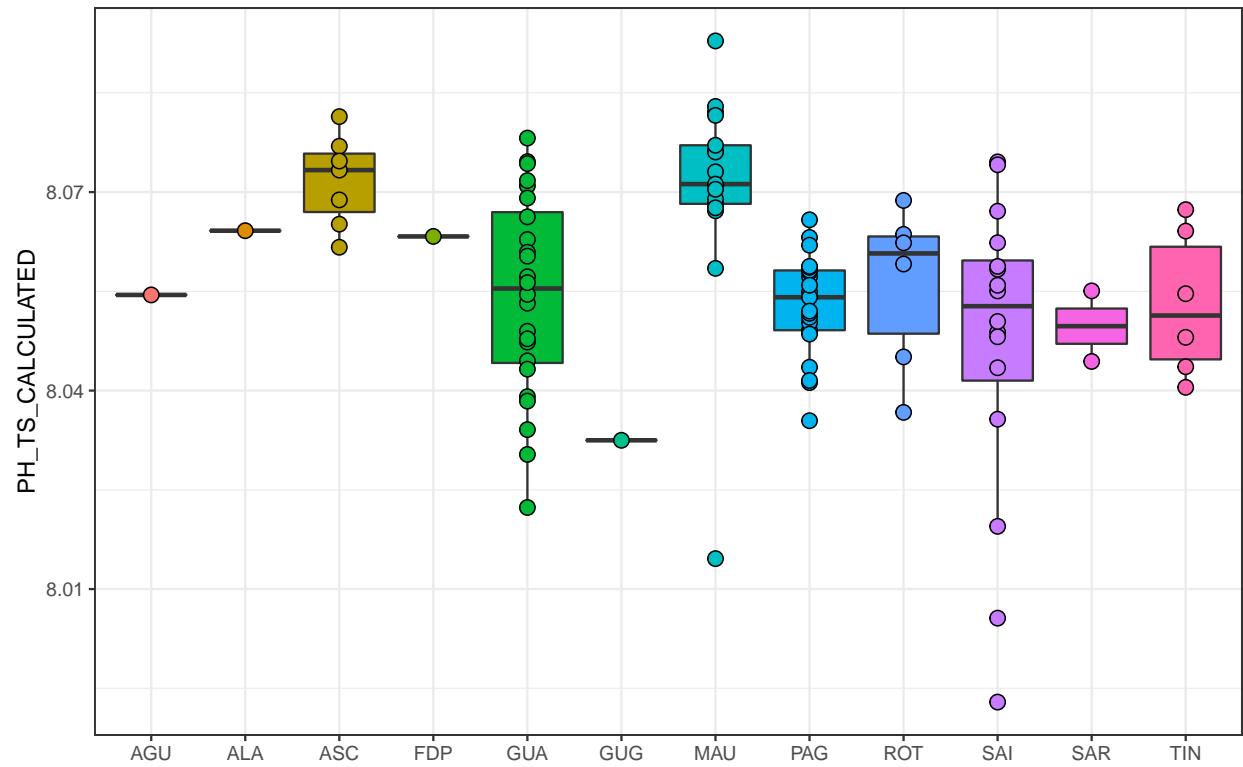
Samples missing TALK_UMOL_KG values	
	4116
	4123
	4143

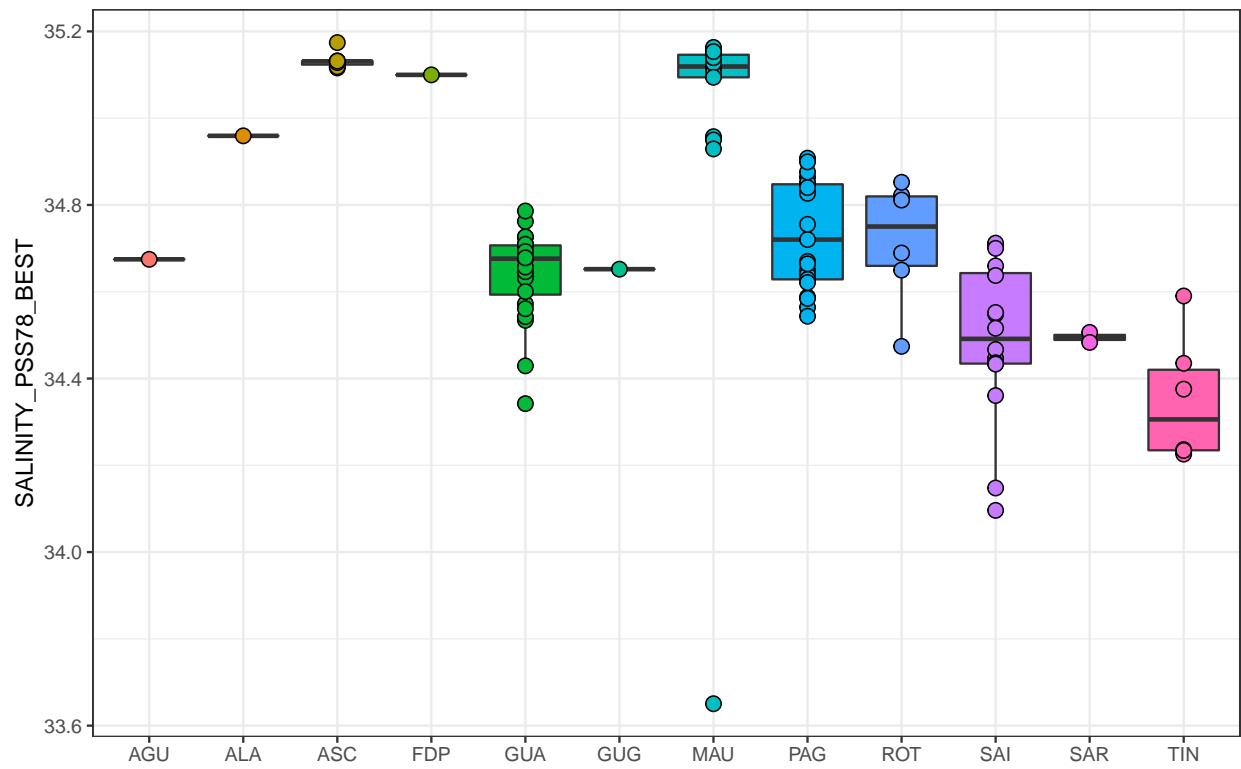
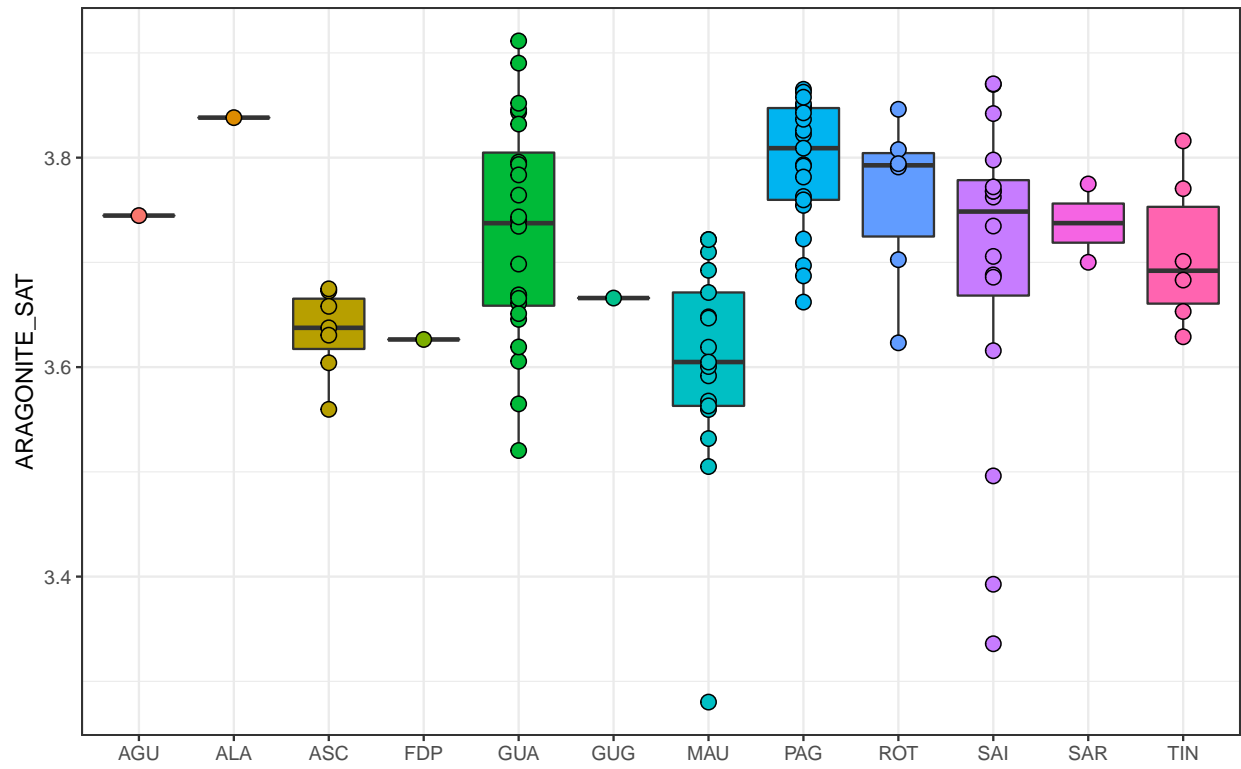
[1] “The following samples are missing DIC, pH, pCO<sub>2</sub>, and Aragonite\_Sat values:”

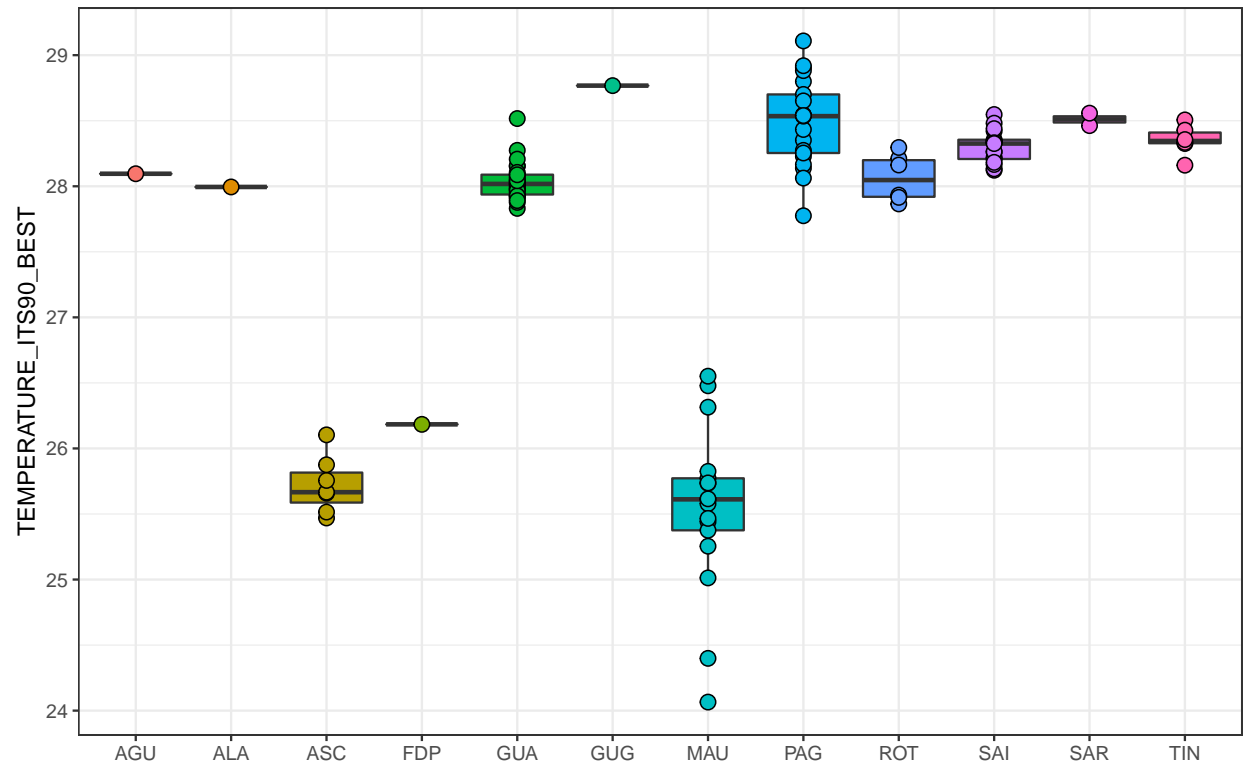
Samples missing DIC_UMOL_KG values	
	4116
	4123
	4143

Sample data by island:









## Diel suite plots:

[1] "No diel suite samples in data set."