



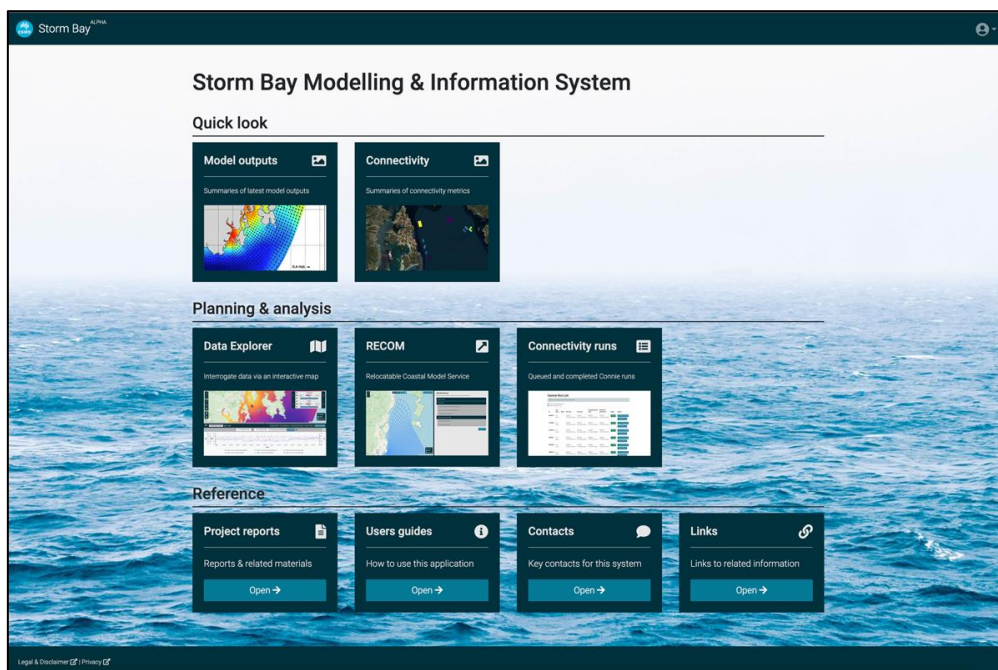
**FRDC**

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APPENDICES PART2

# Storm Bay Biogeochemical Modelling and Information System

Supporting sustainable aquaculture in Tasmania.



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March 2023

FRDC Project No 2017-215



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ISBN [Insert ISBN/ISSN – researcher to obtain]

**Storm Bay Biogeochemical Modelling and Information System: supporting sustainable aquaculture in Tasmania**  
**FRDC Project No. 2017-215**

**March 2023**

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Wild-Allen, K., Andrewartha, J., Baird, M., Beardsley, J., Brewer, E., Bodrossy, L., Eriksen, R., Gregor, R., Griffin, D., Herzfeld, M., Hughes, D., Jansen, P., Langlais, C., Margvelashvili, N., Martini, A., McMahon, M., Revill, A., Rizwi, F., Skerratt, J., Schwanger, C., Sherrin, K., Frydman, S., Wild, D. 2022 *Storm Bay Biogeochemical Modelling and Information System: supporting sustainable aquaculture in Tasmania (FRDC 2017-215) Final Report Appendices*. CSIRO Oceans & Atmosphere, Hobart, March 2023.

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## **10 Appendices**

A.7 Biogeochemical model results and analysis

A.8 Scenario simulation results and analysis

## A.7 Biogeochemical model results and analysis

The following pages show figures of:

1. Simulated seasonal cycle of monthly mean, 10<sup>th</sup> and 90<sup>th</sup> percentile spatial distributions of water properties from 2015-2019 for surface (T), bottom (B) or depth integrated (I) for chlorophyll.
2. Simulated seasonal cycle of monthly mean water properties for 2015-2019 along a 70km long transect crossing Storm Bay from inshore (left) to offshore (right) [vertical scale is 0 – 120 m depth].
3. Seasonal variation in water quality for model sub-regions (Figure A7.1). Box plot shows mean, 25th and 75th percentiles and range for all model cells in each sub-region for 2015-2019; for light transmission the % area where bottom PAR exceeds 1% surface light is shown.
4. Simulated interannual variation in monthly mean, spatial distributions of water properties for 2015-2020 for surface (T), bottom (B) or depth integrated (I) for chlorophyll.

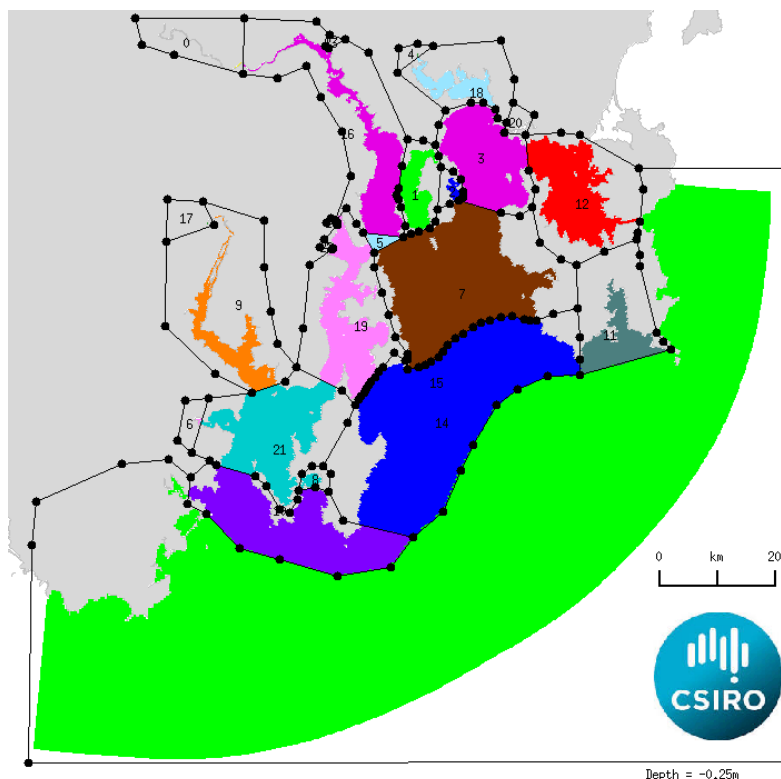
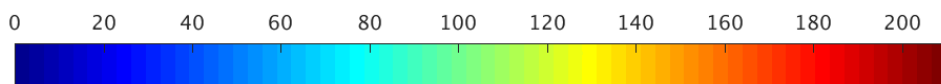
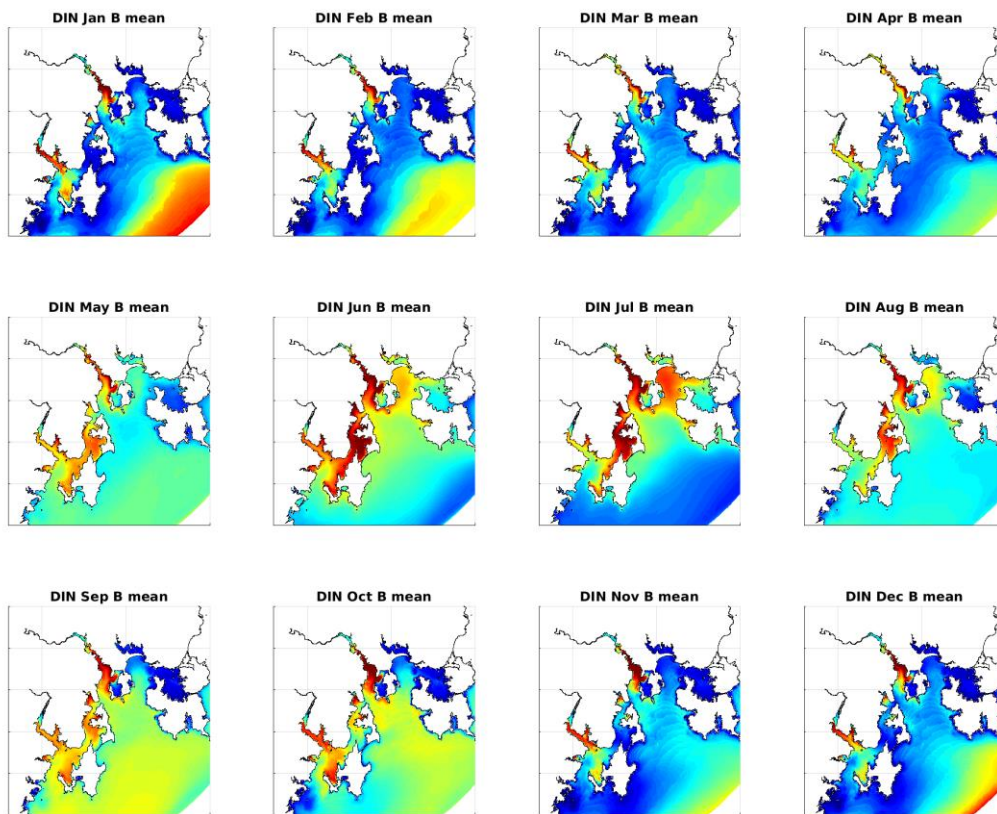
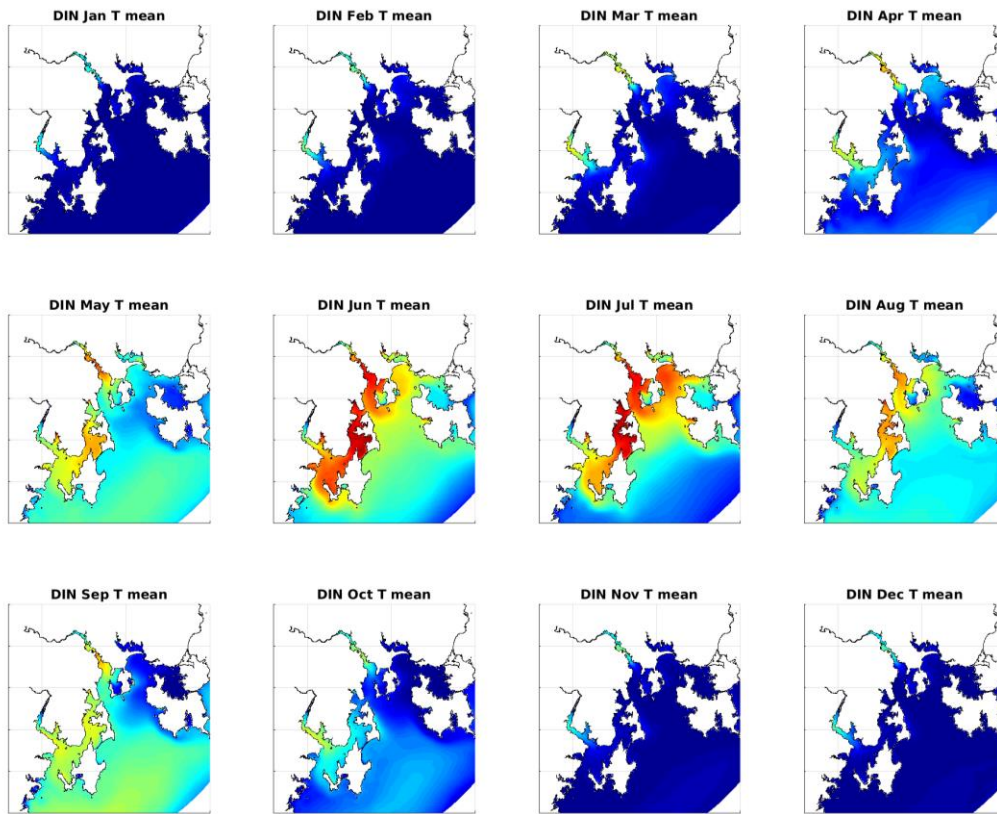
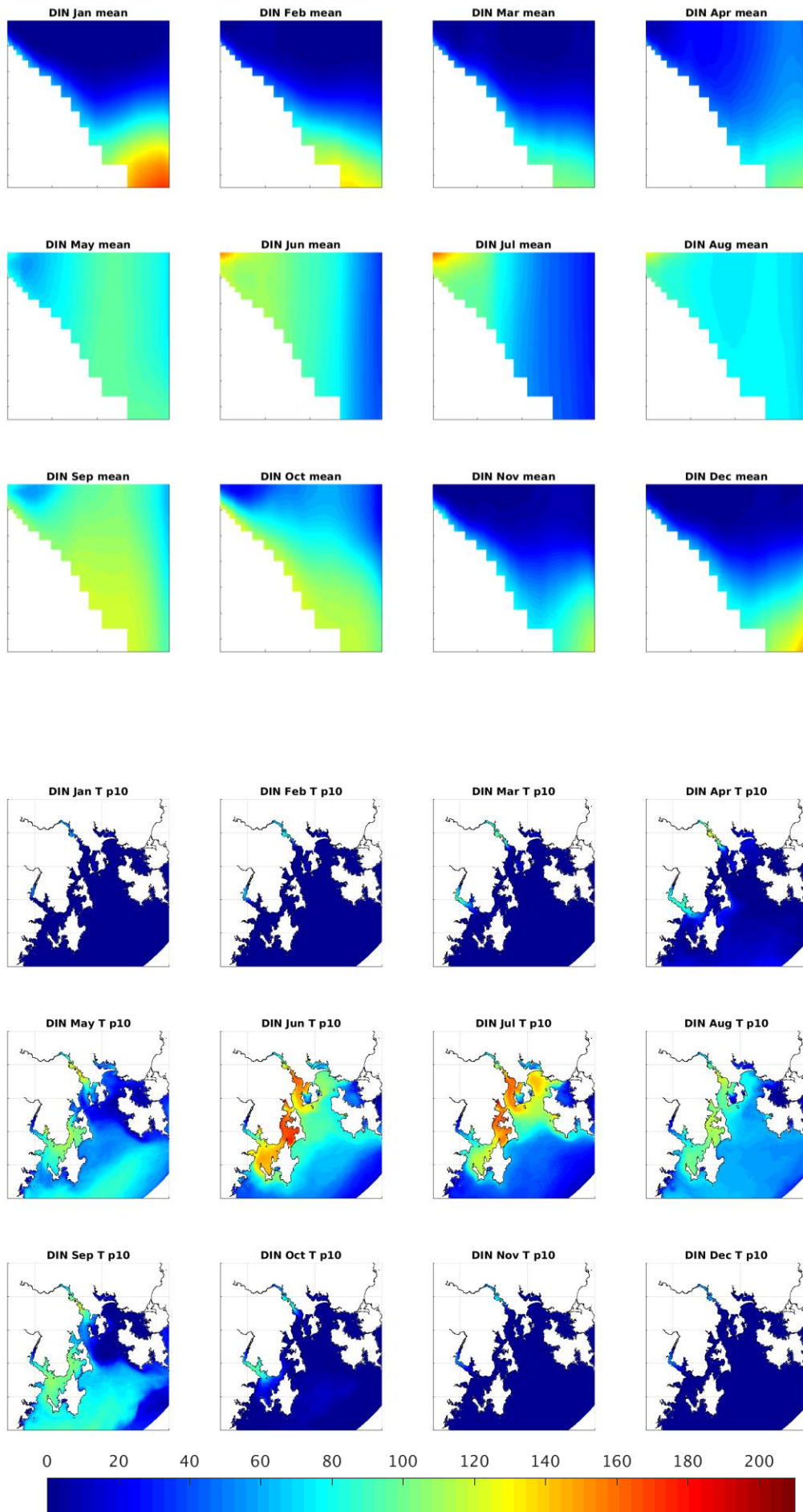
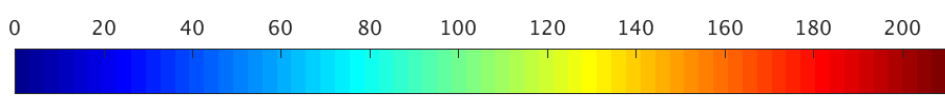
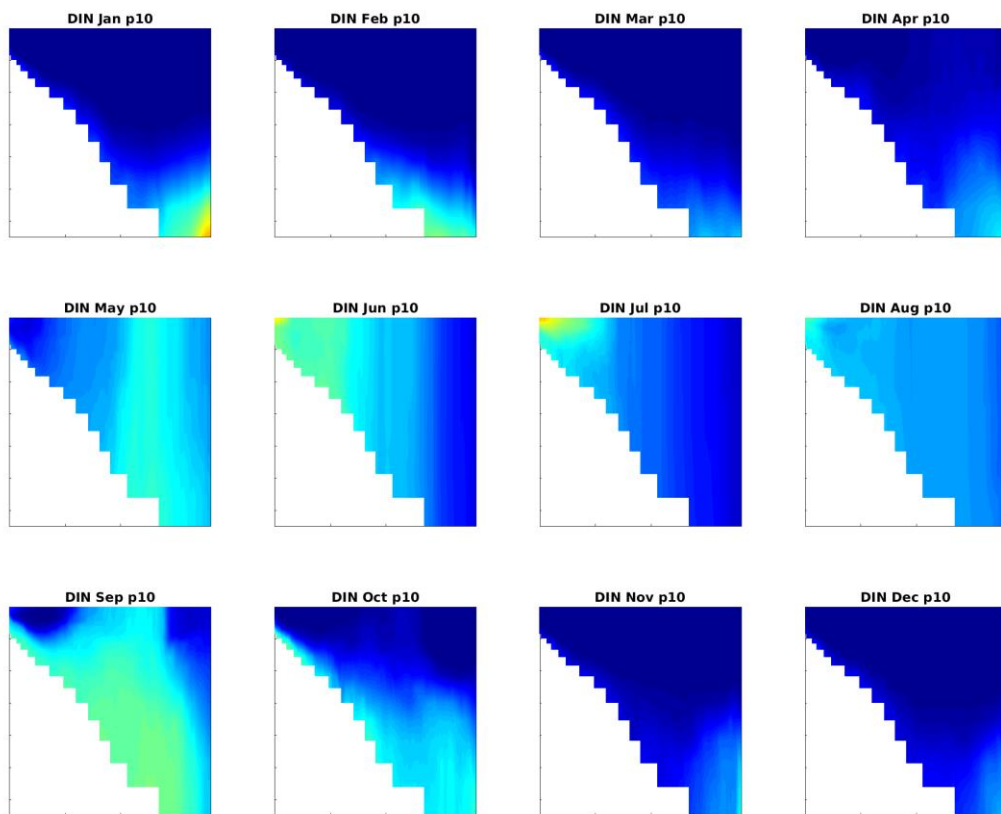
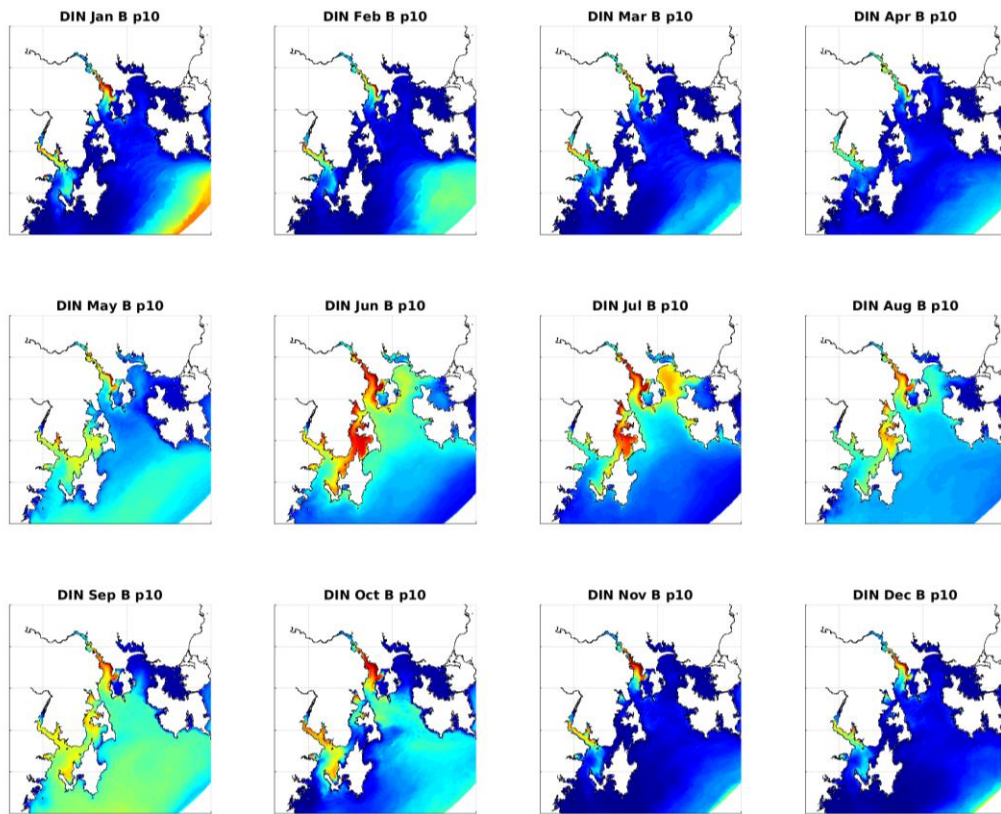


Figure A7.1 Storm Bay model sub regions (based on bathymetry and coastal morphology) for model analysis.



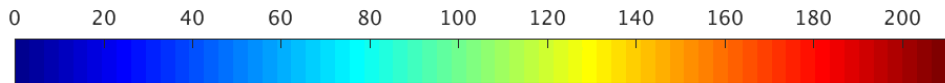
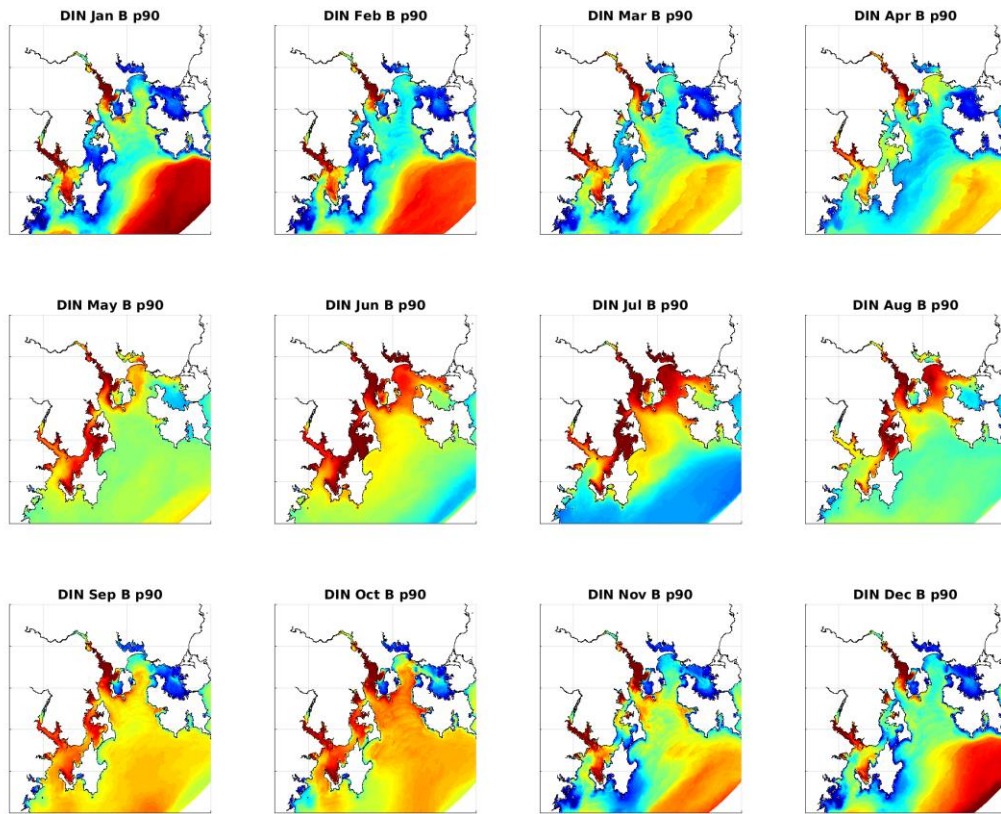
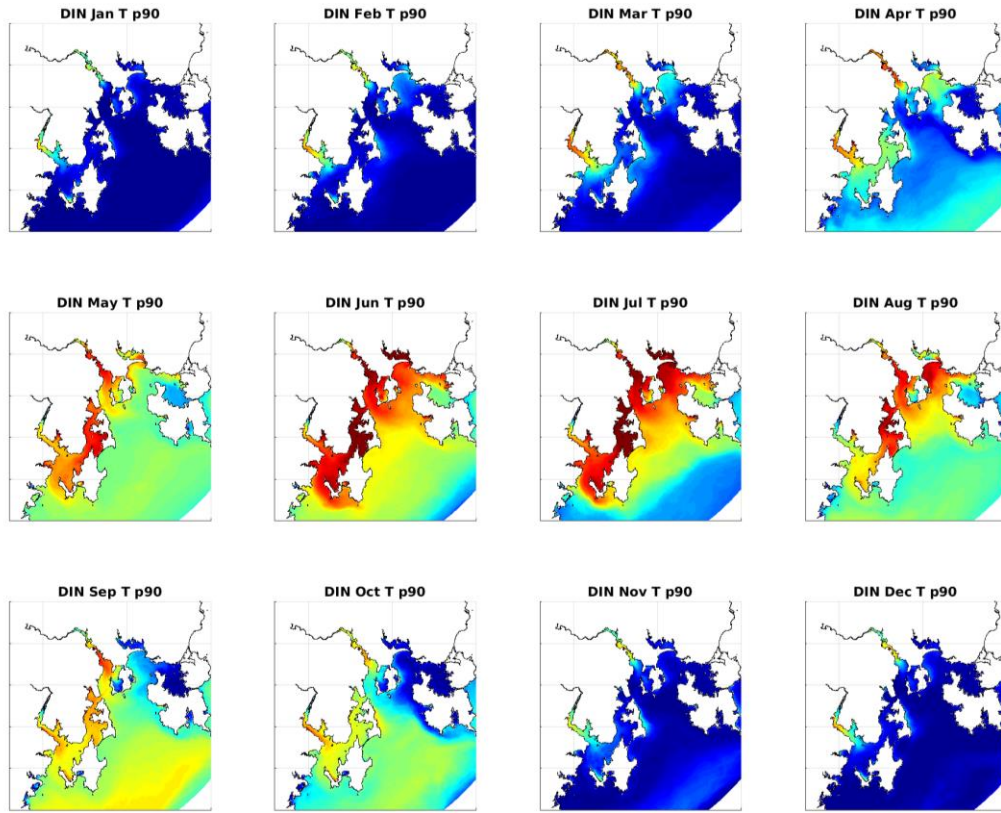
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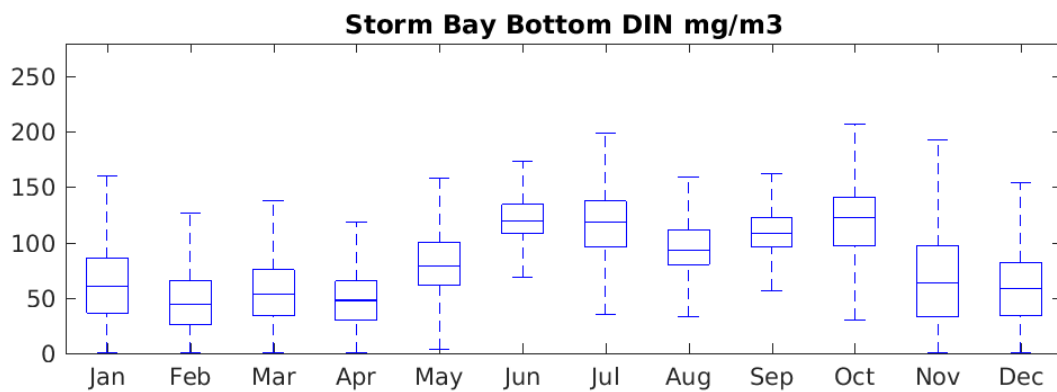
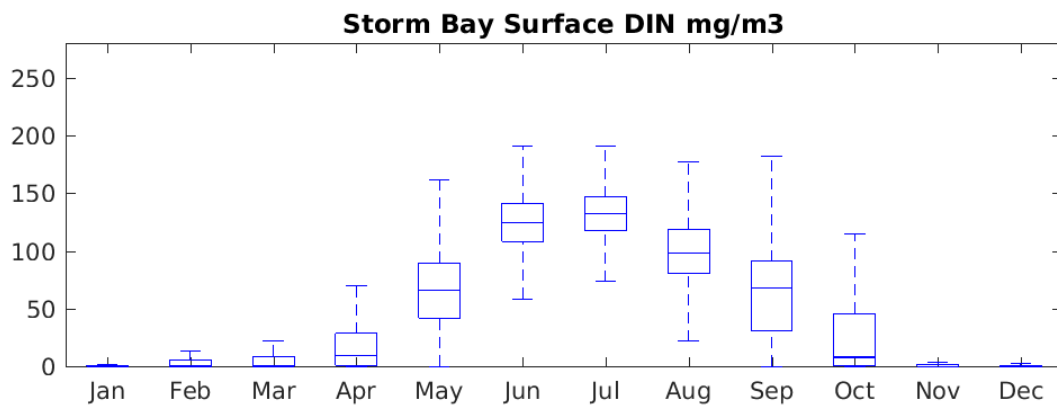
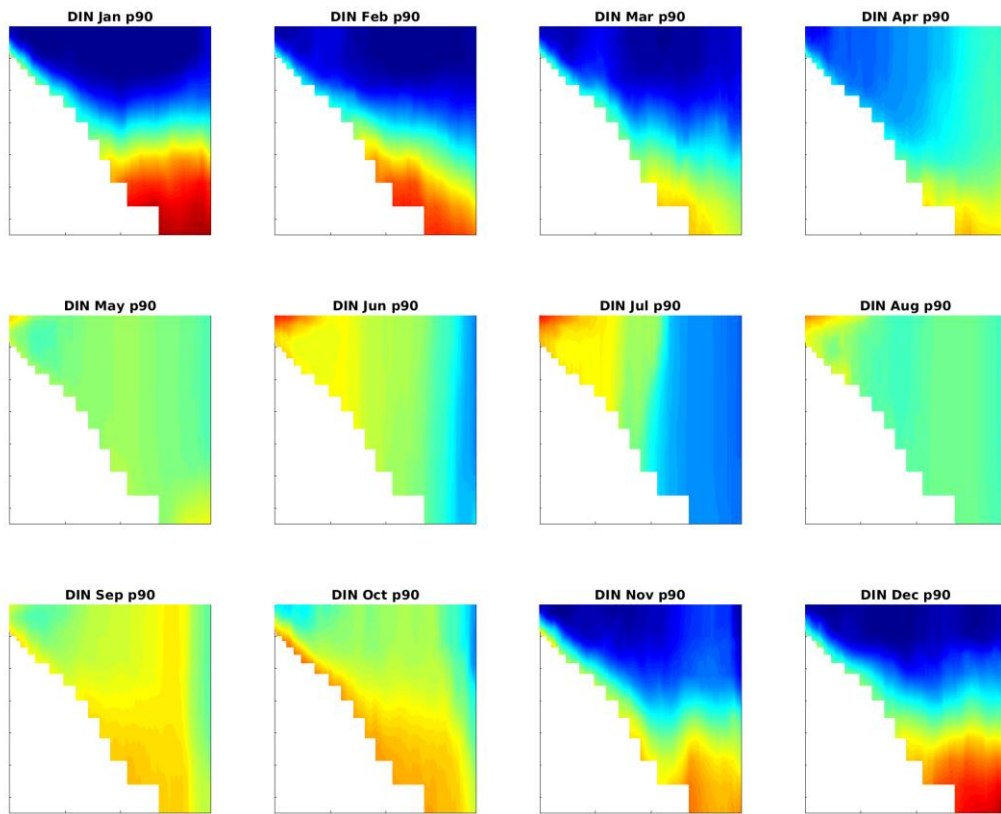


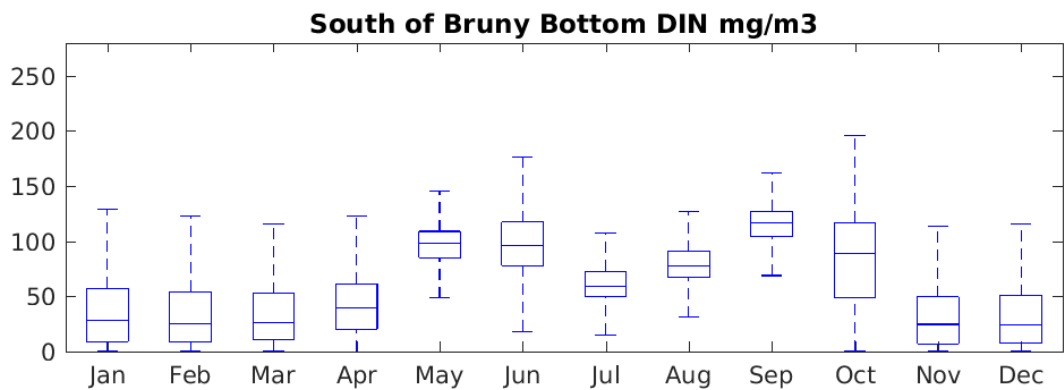
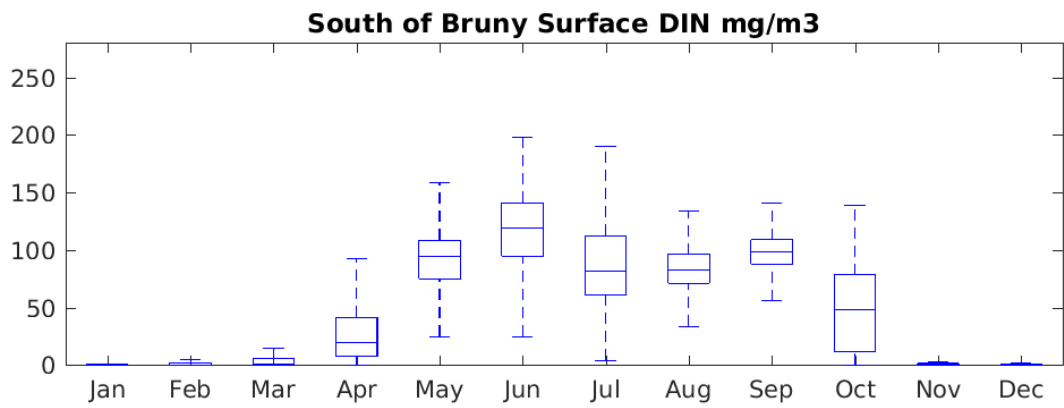
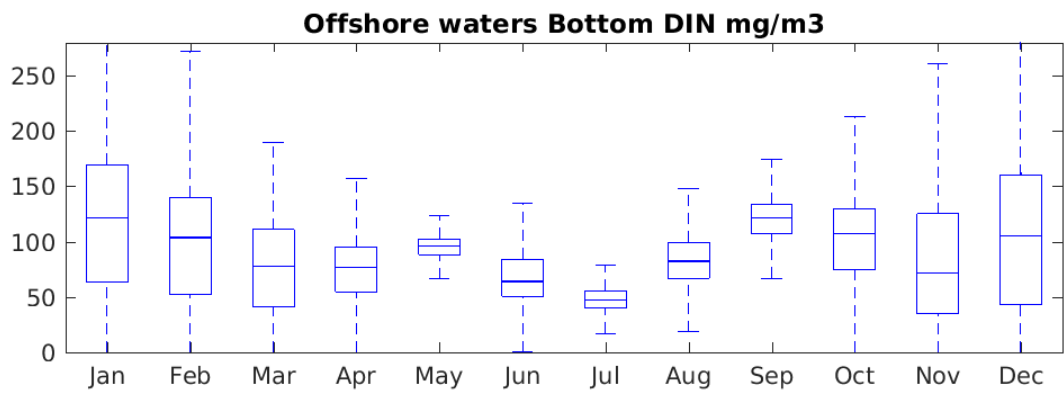
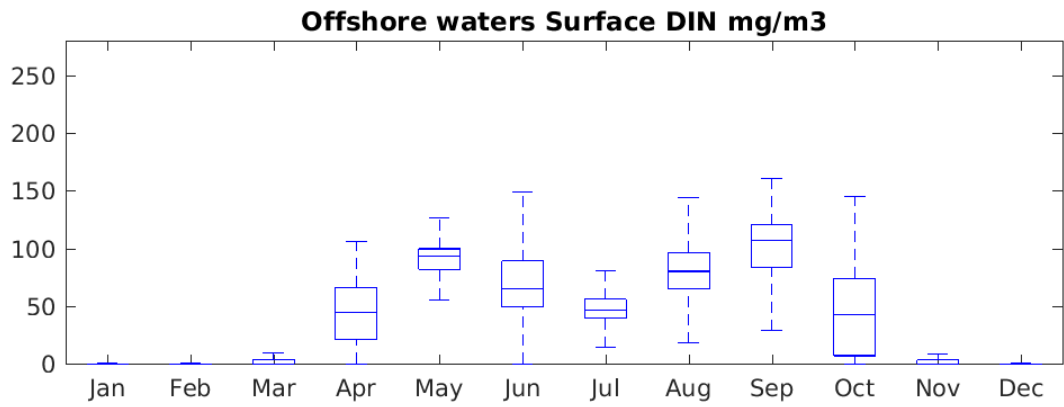
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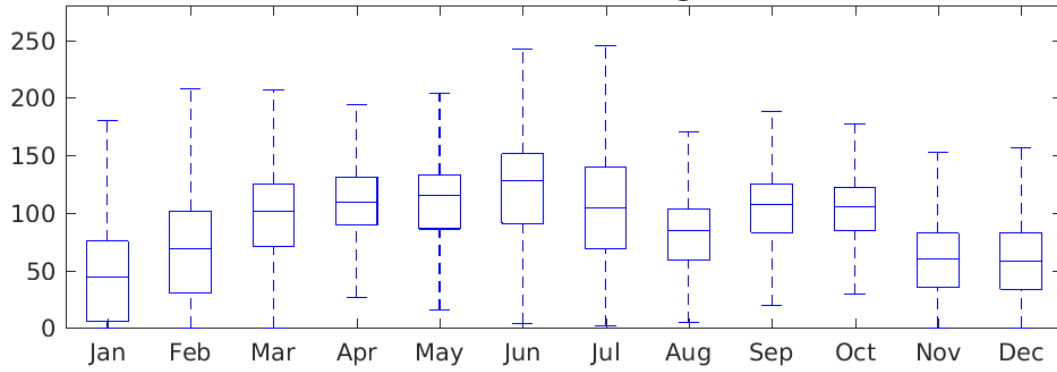


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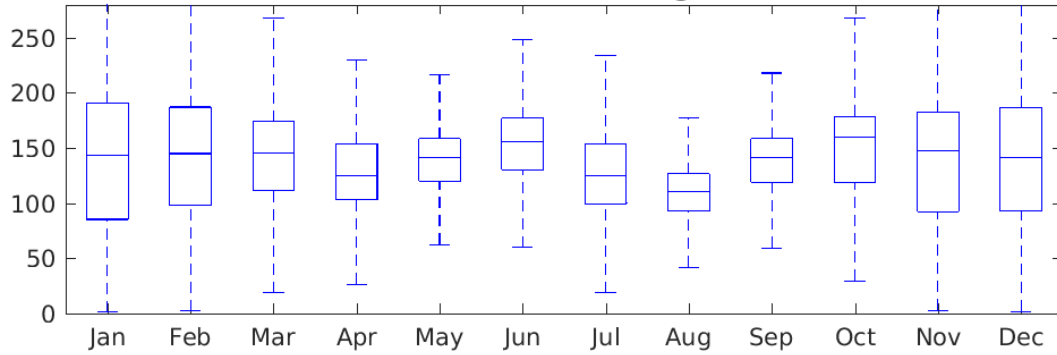




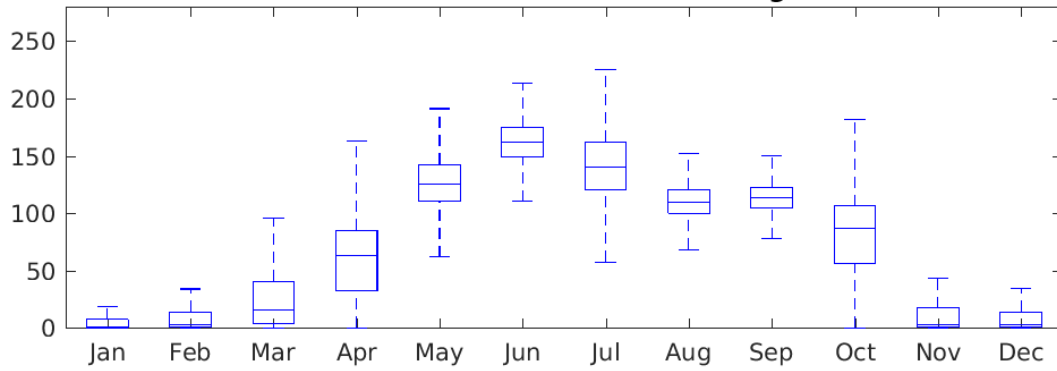
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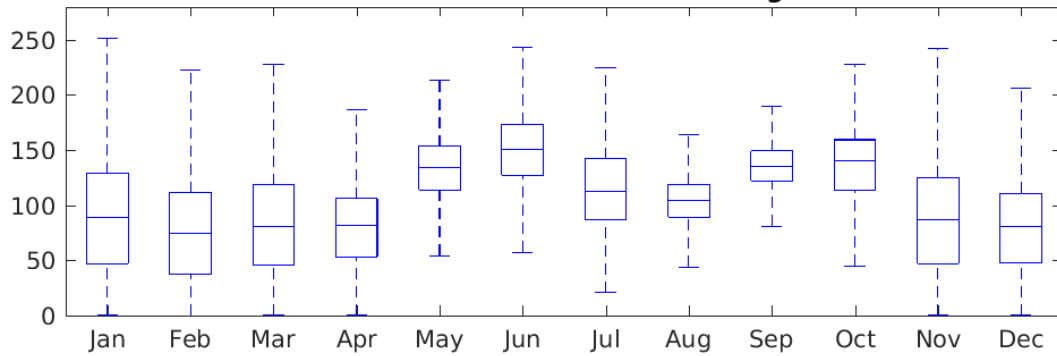
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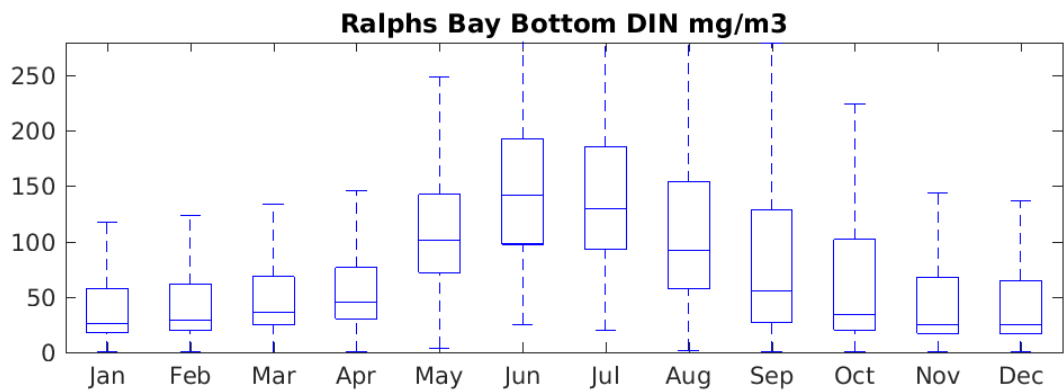
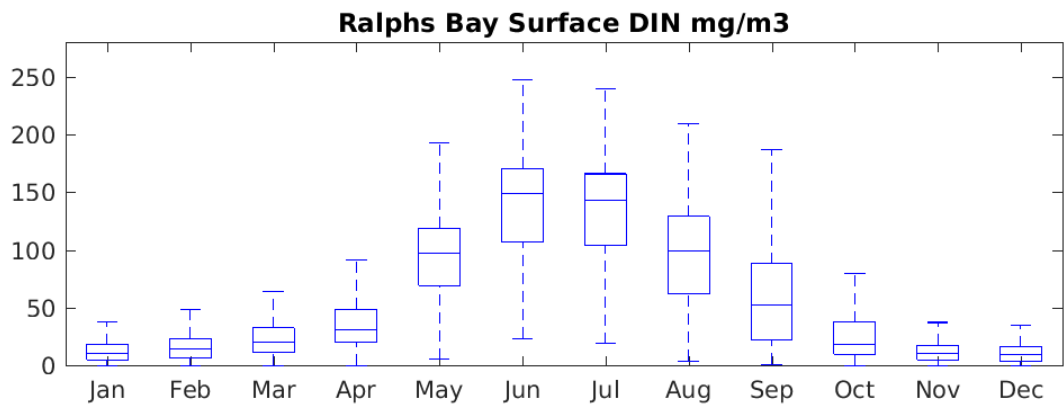
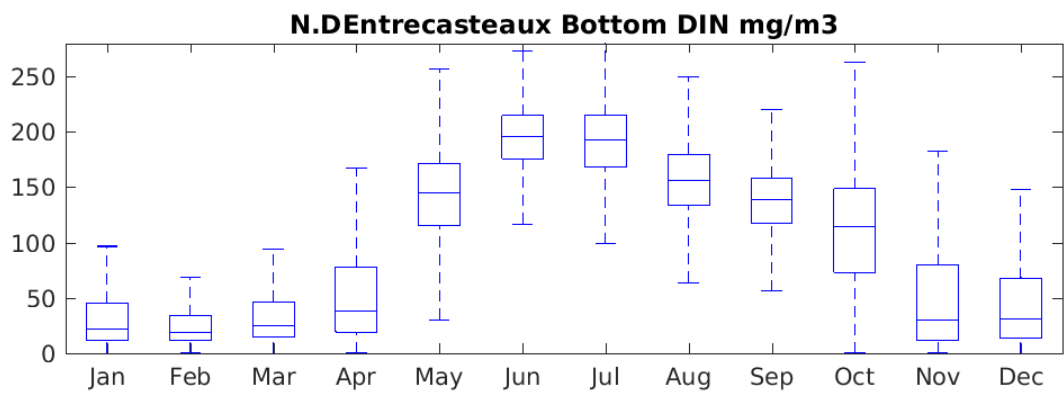
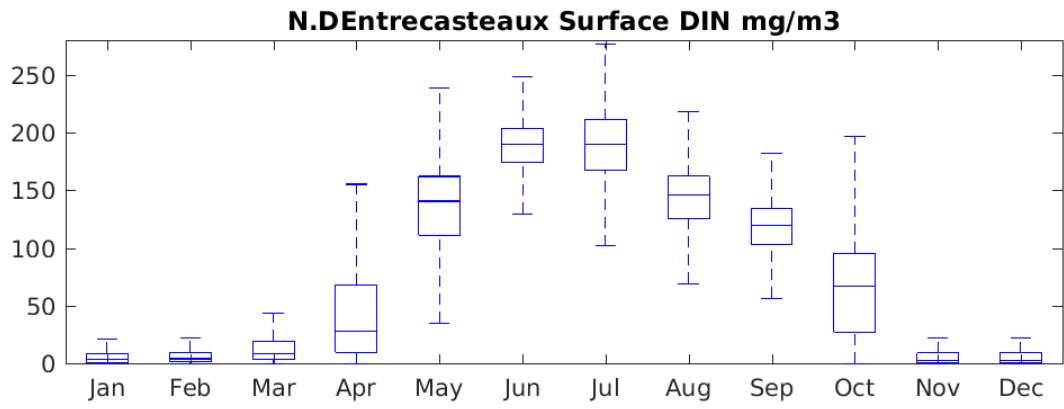


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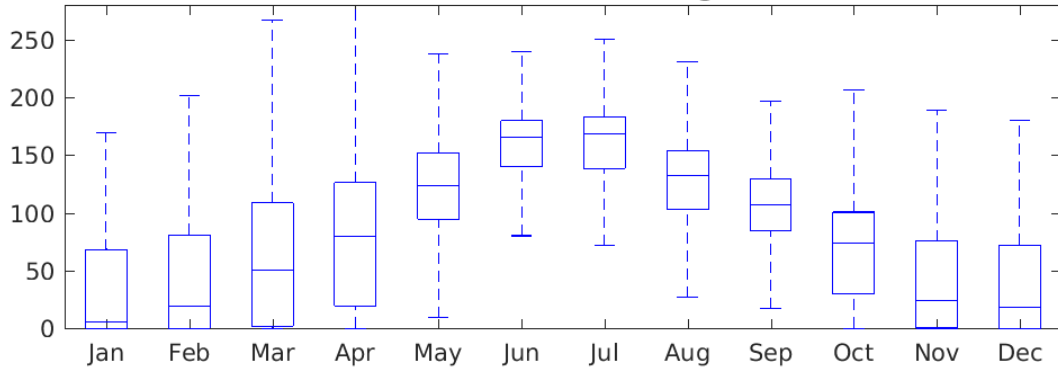


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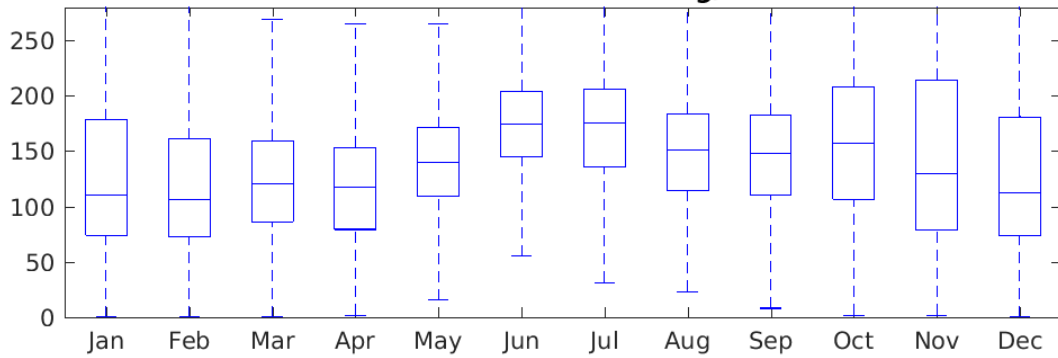




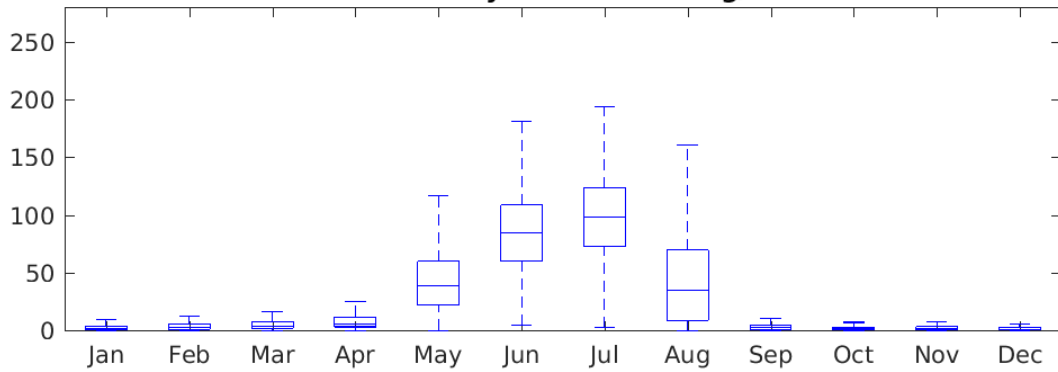
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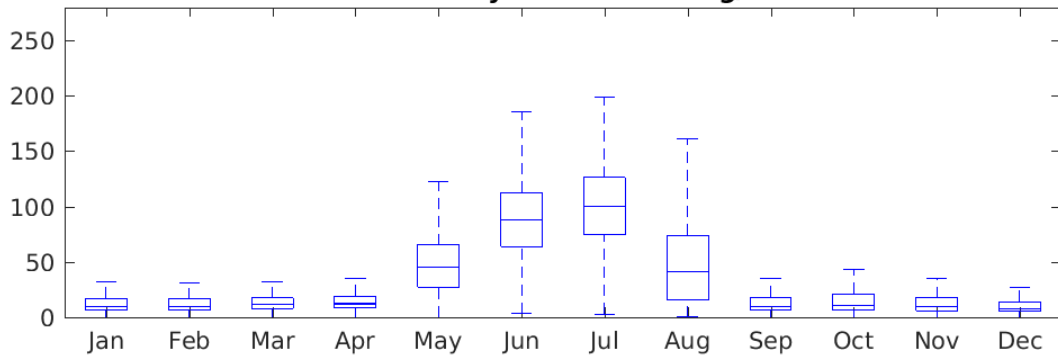
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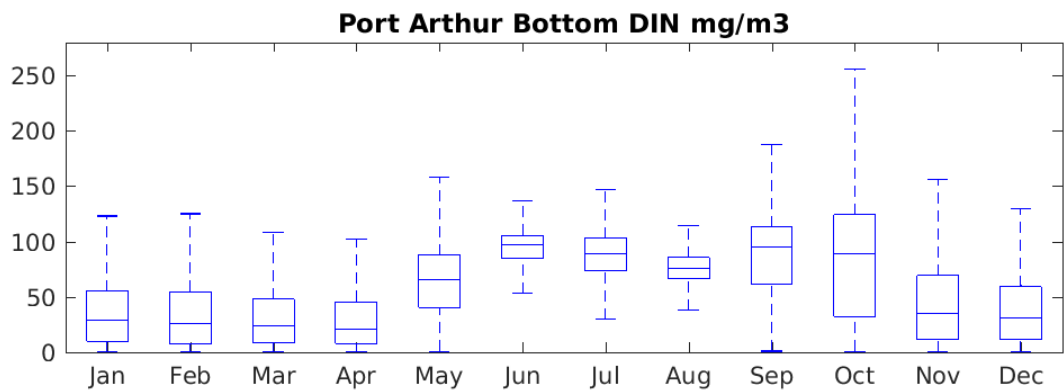
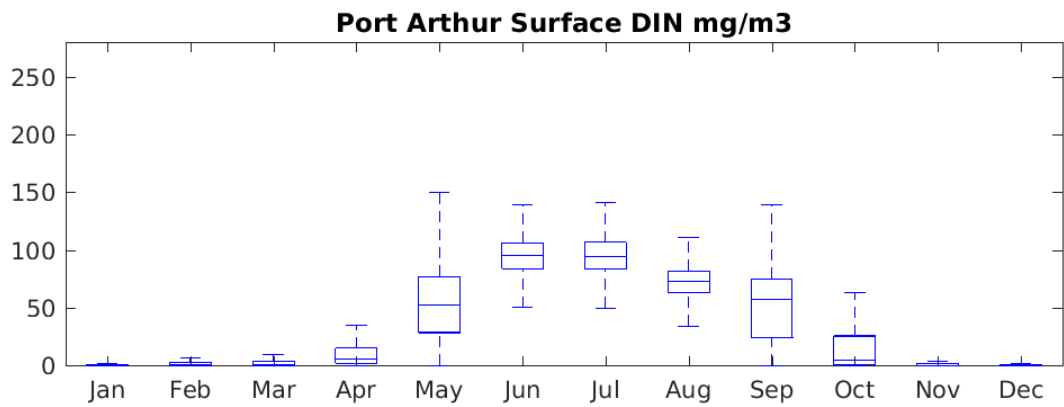
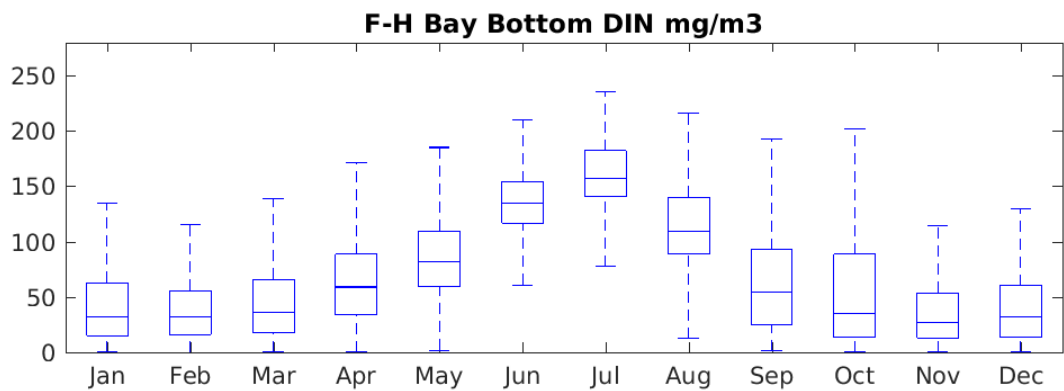
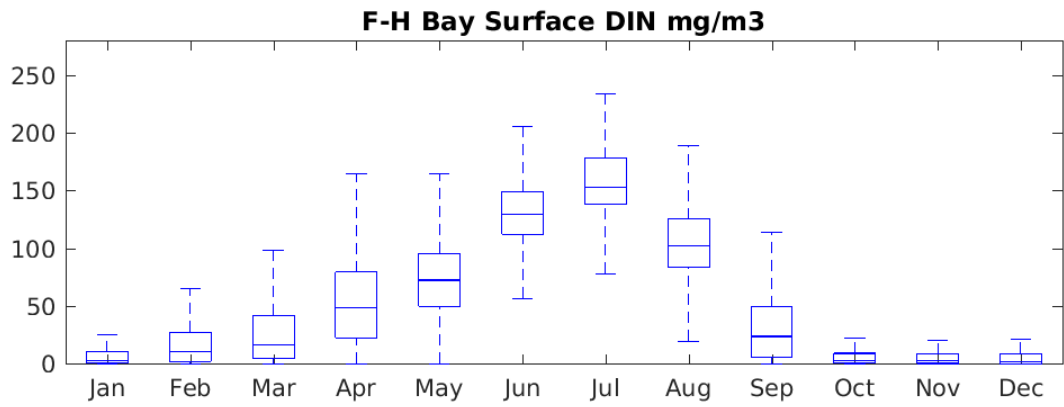


**Norfolk Bay Surface DIN mg/m3**

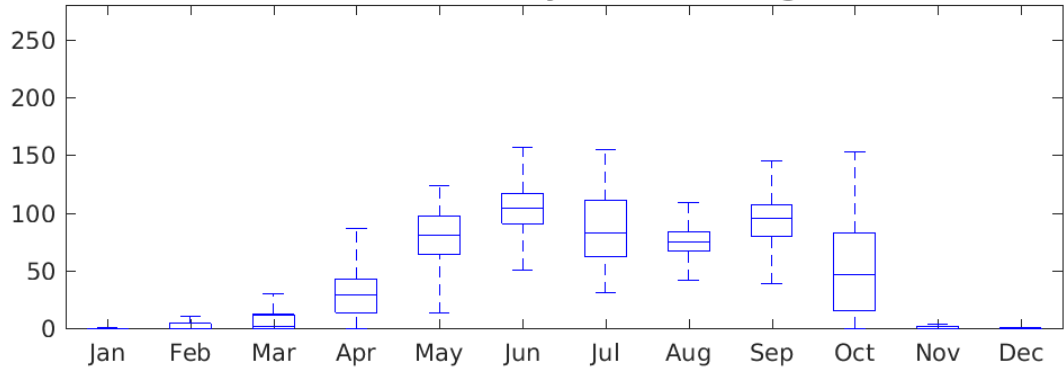


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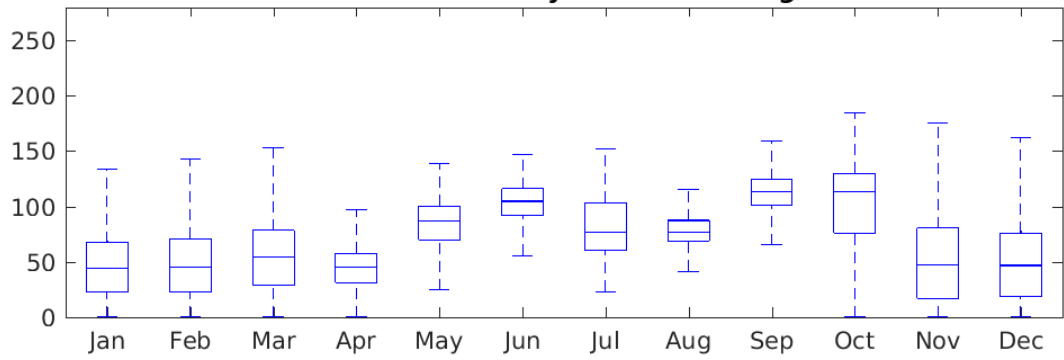




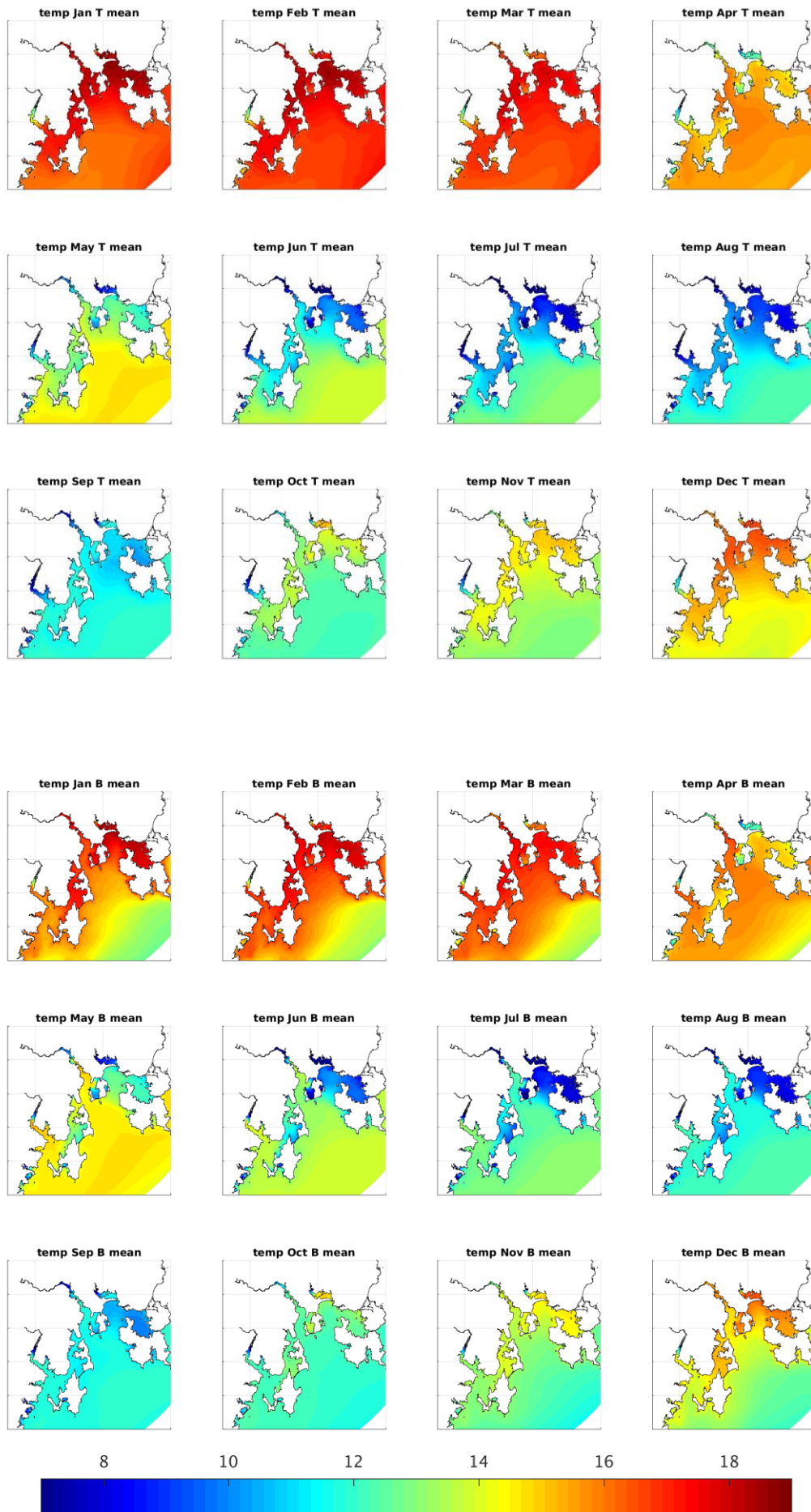
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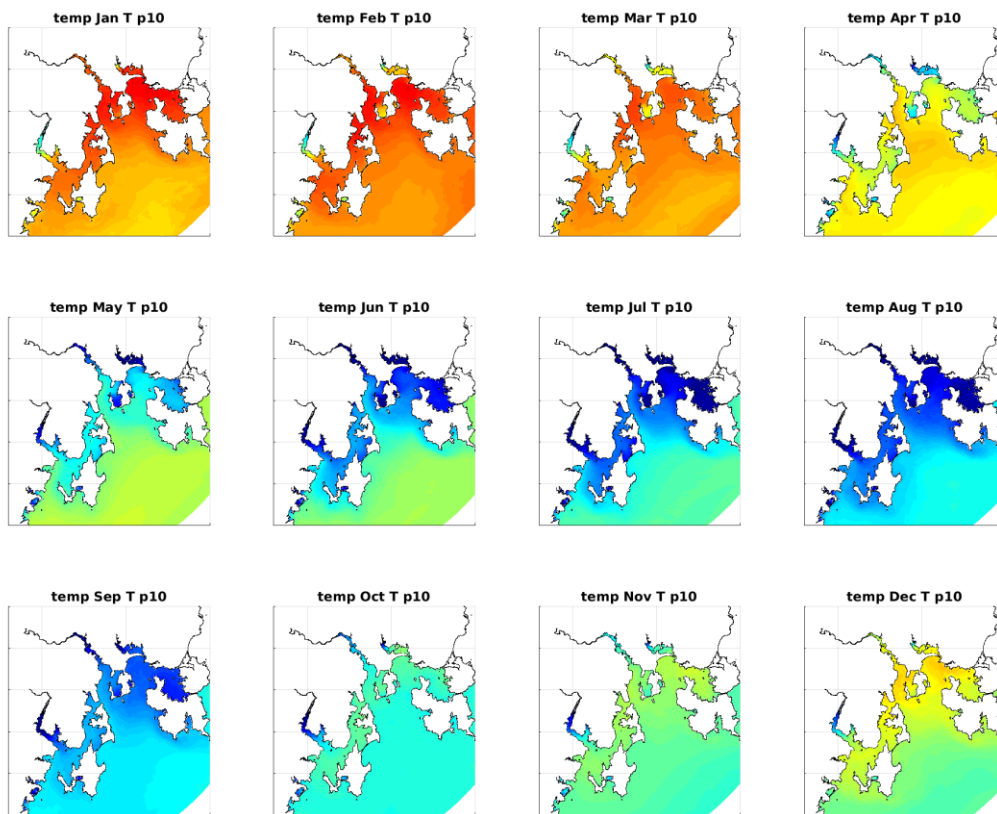
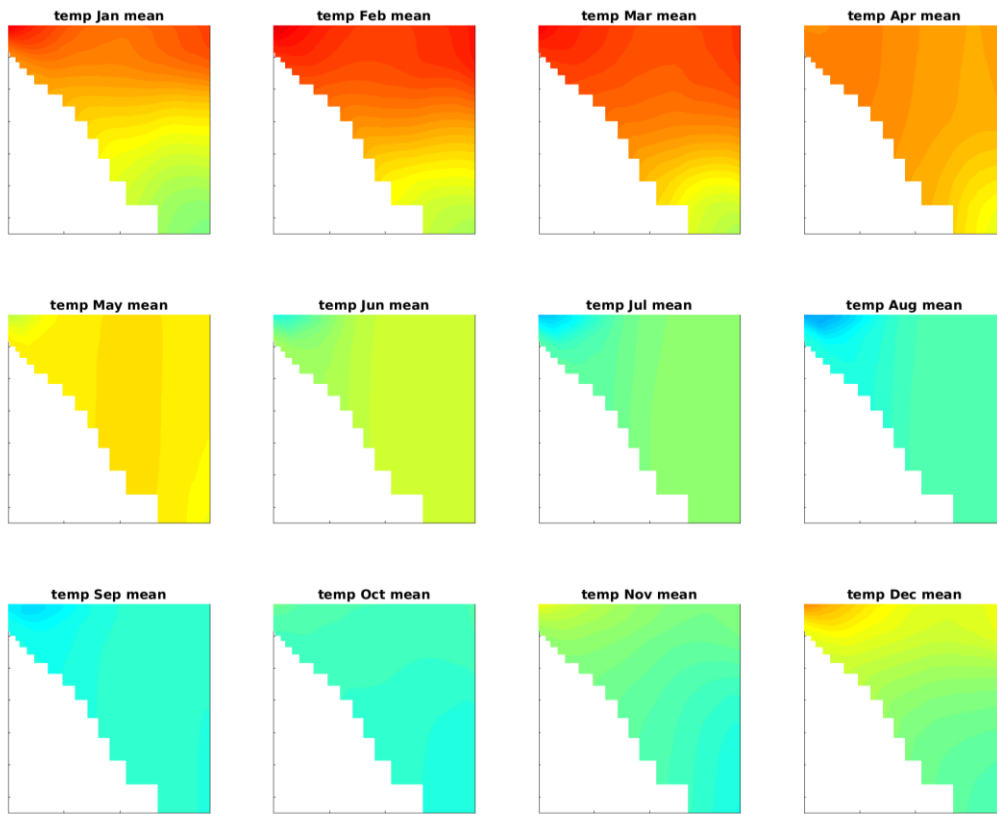
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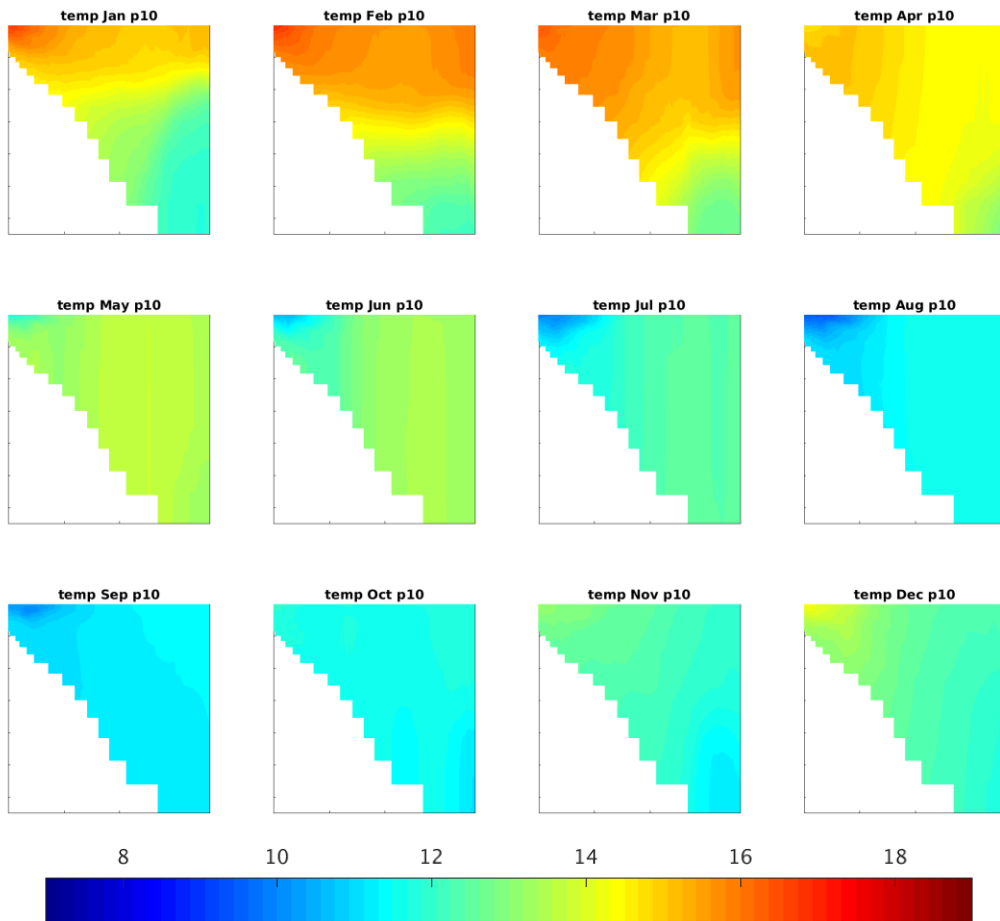
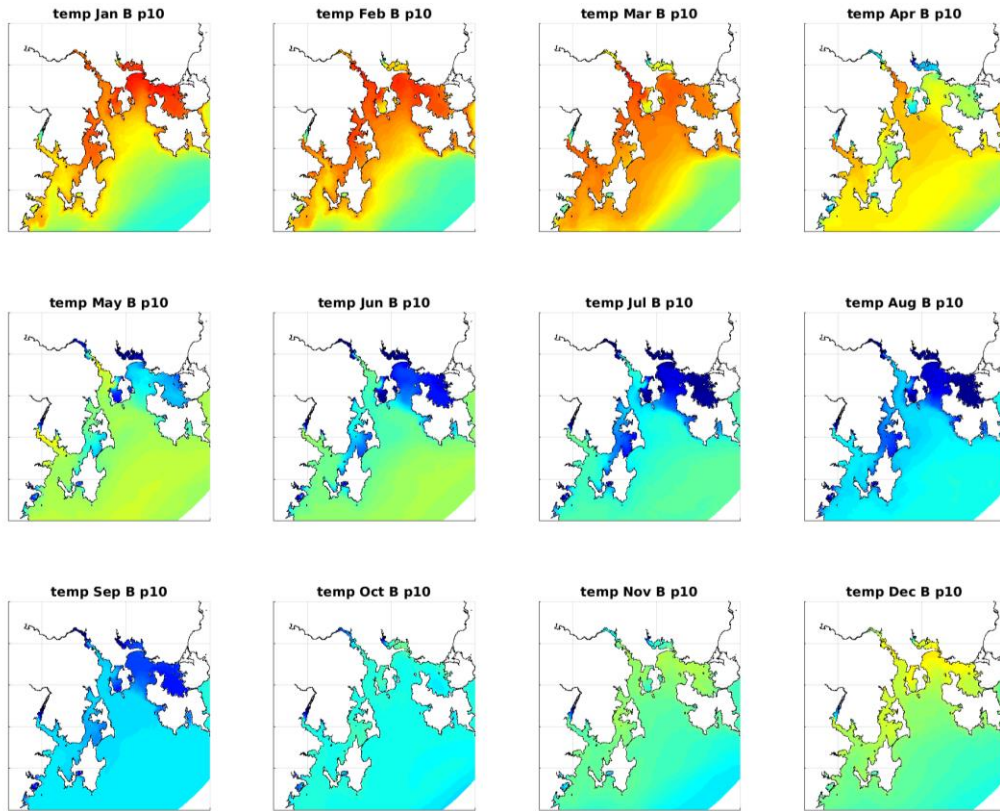


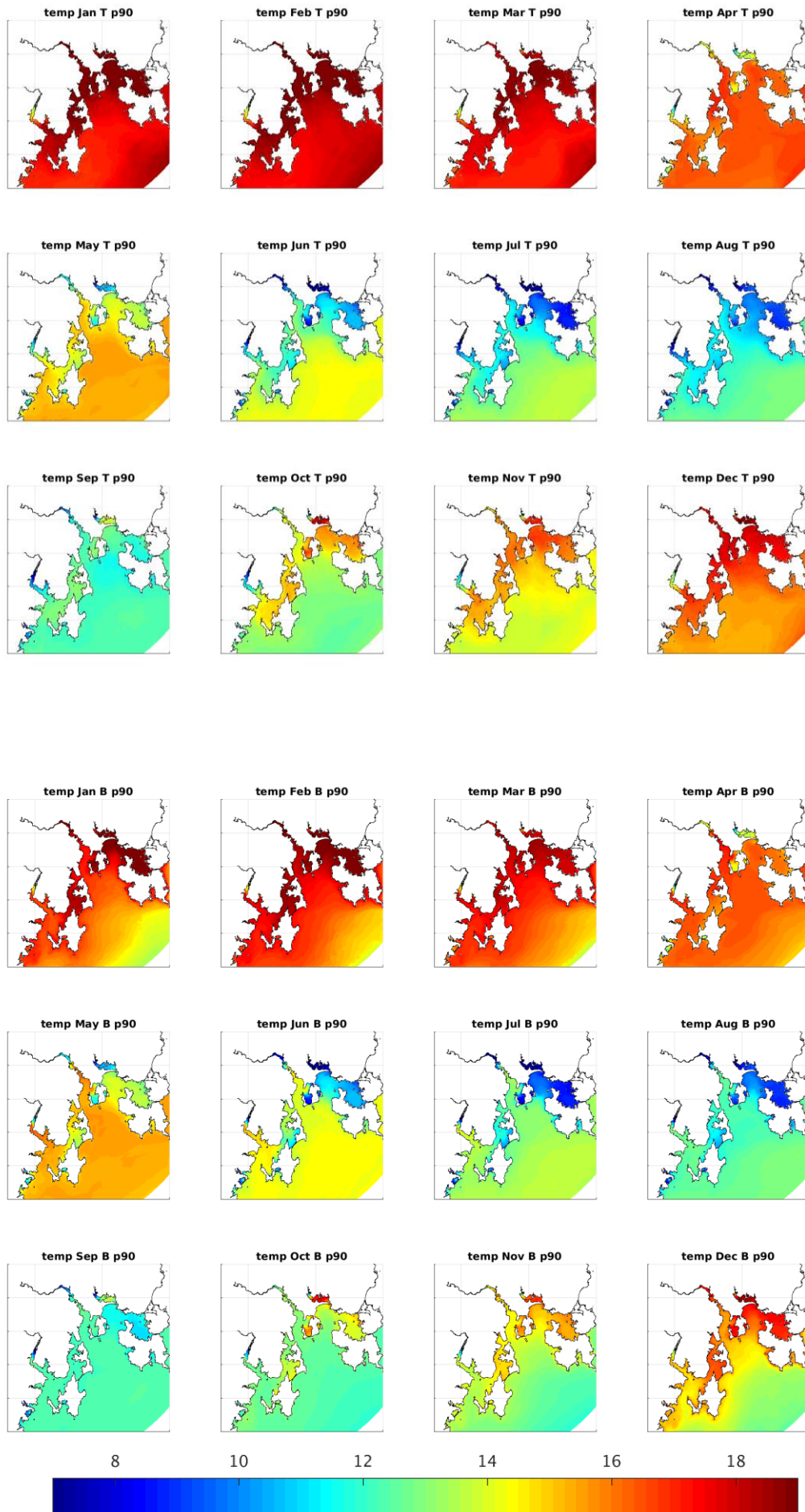


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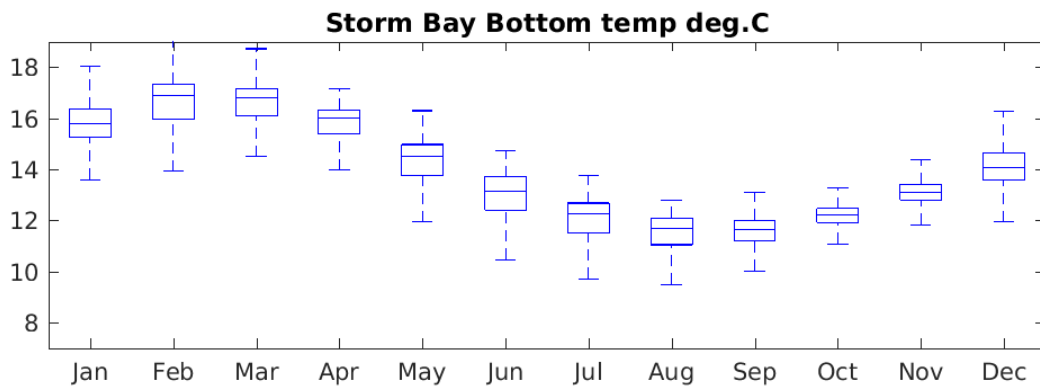
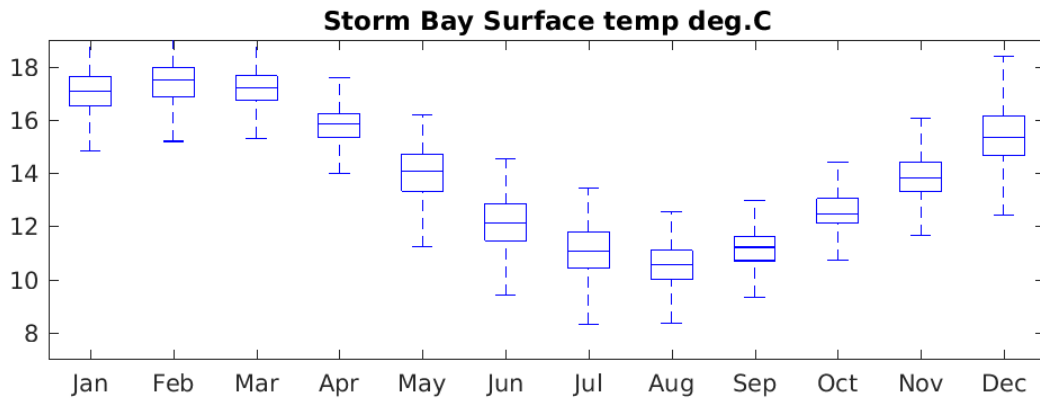
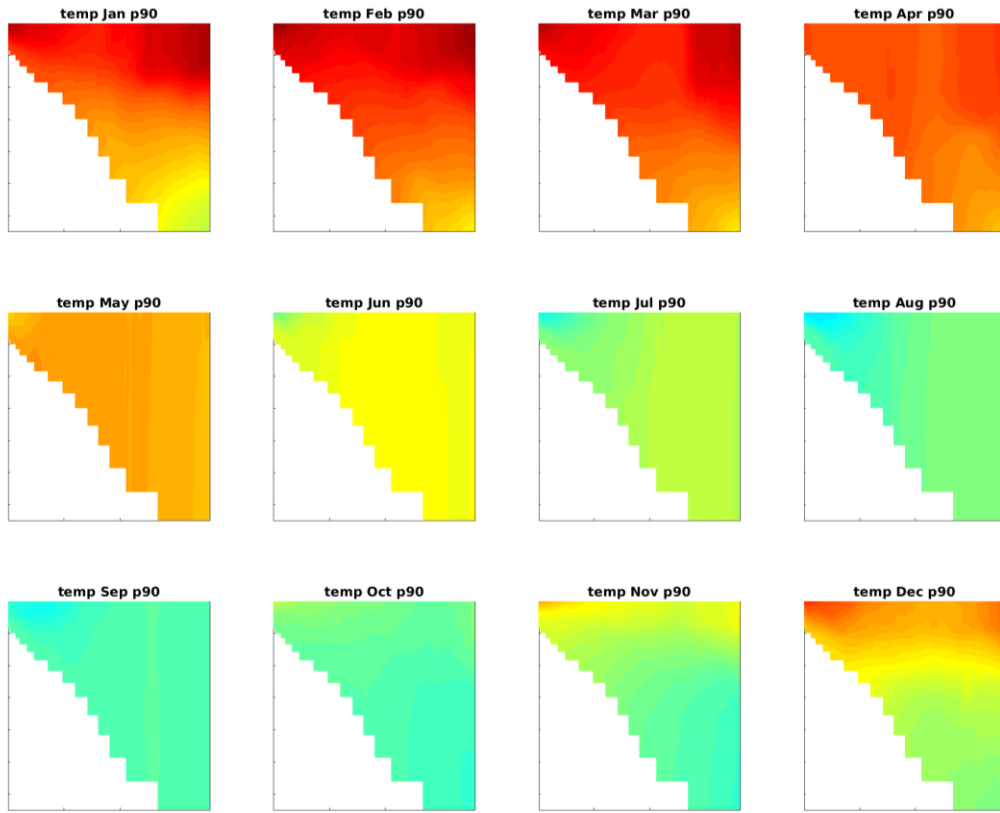


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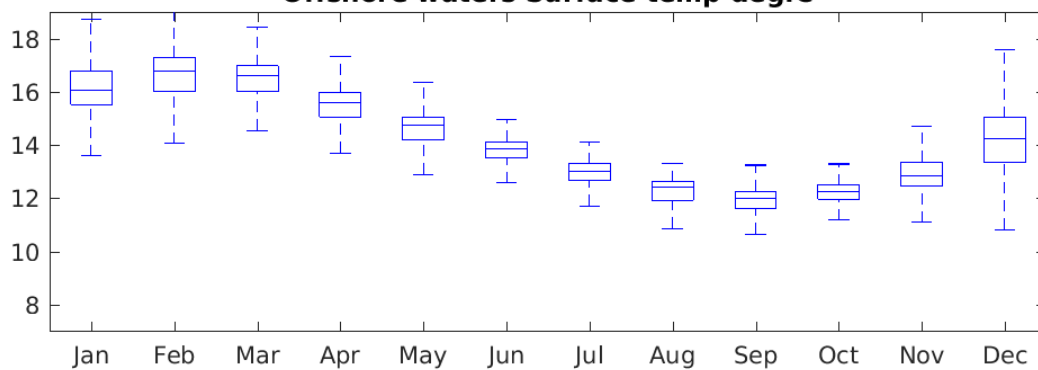




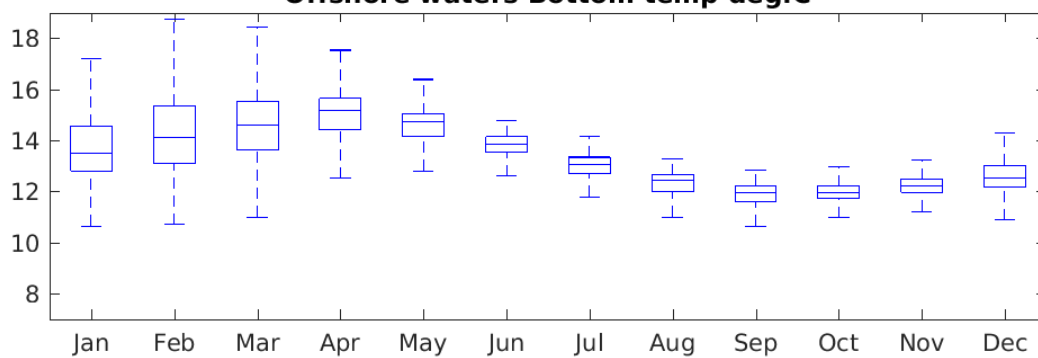
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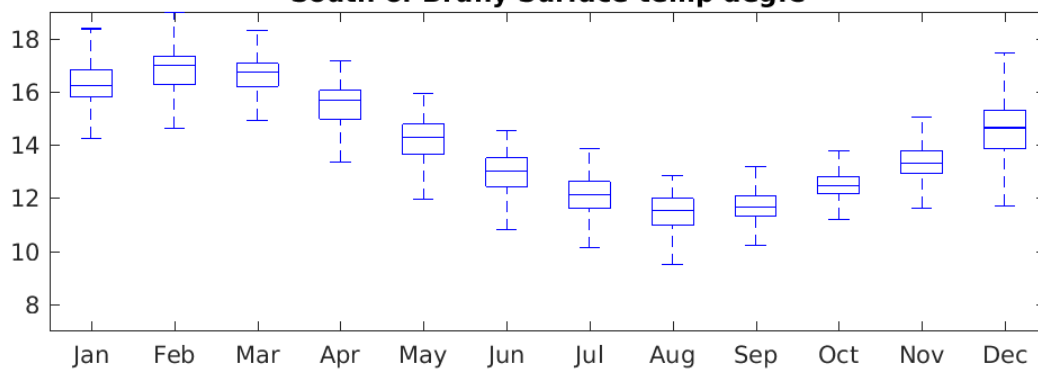
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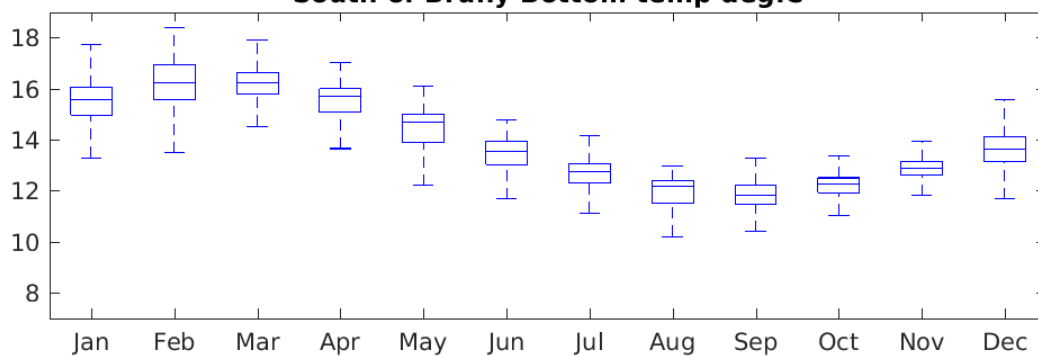
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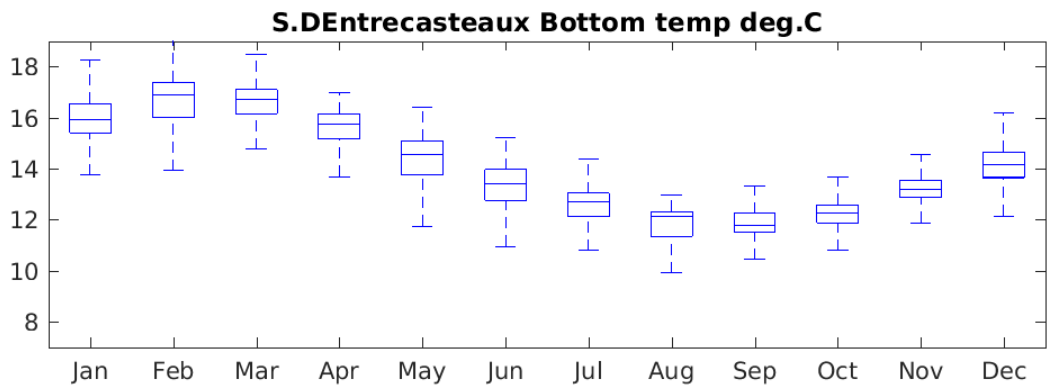
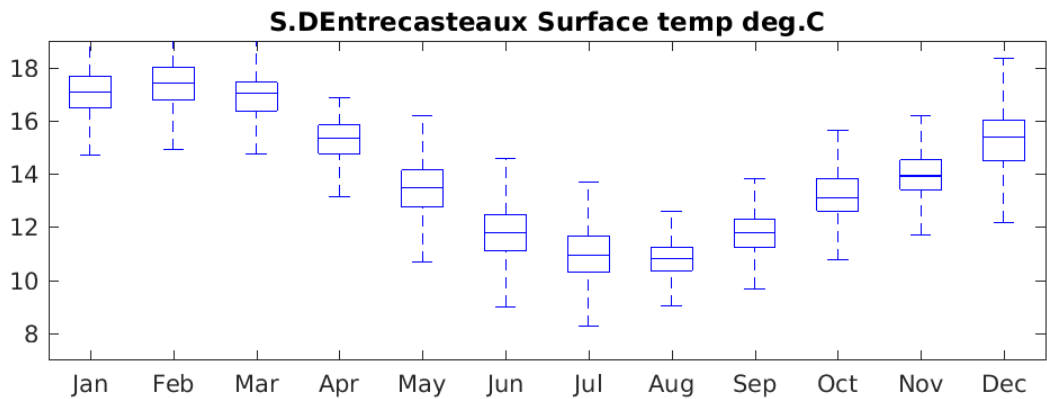
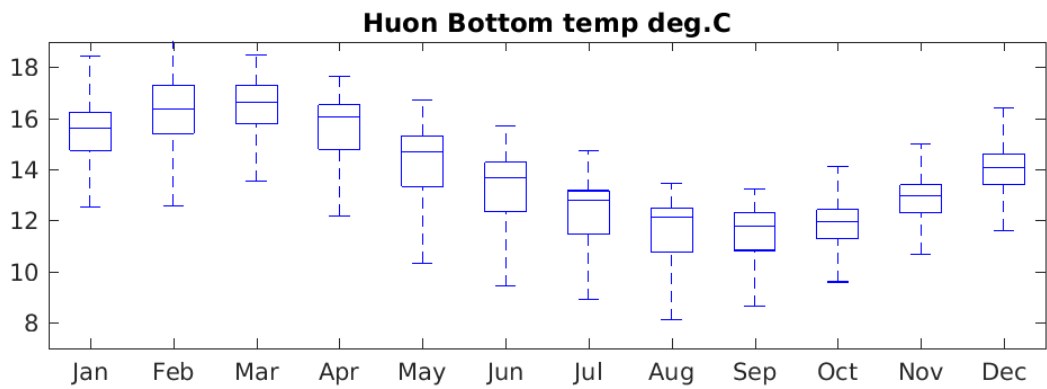
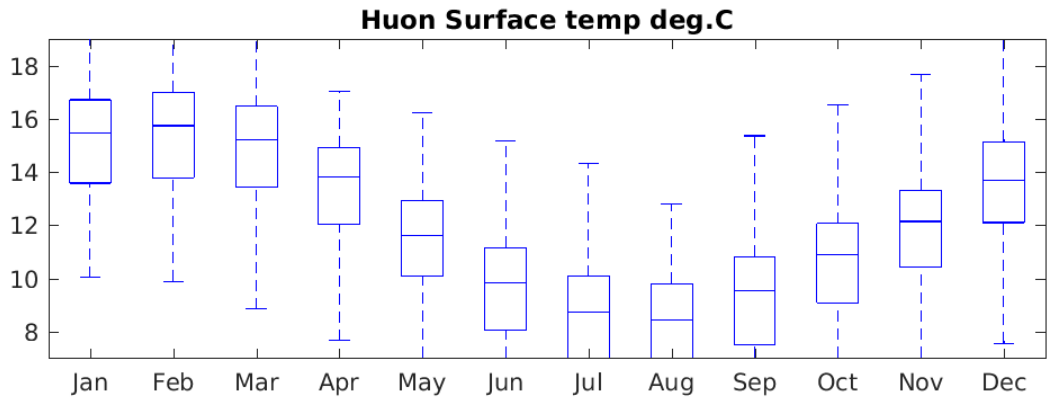


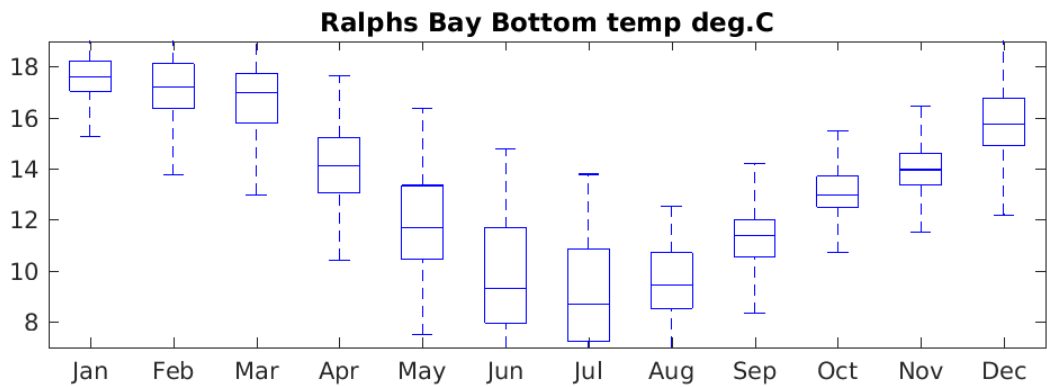
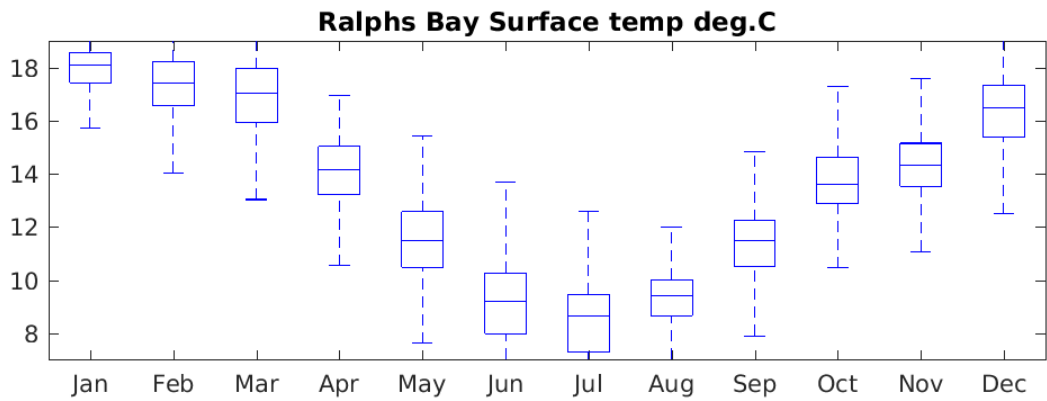
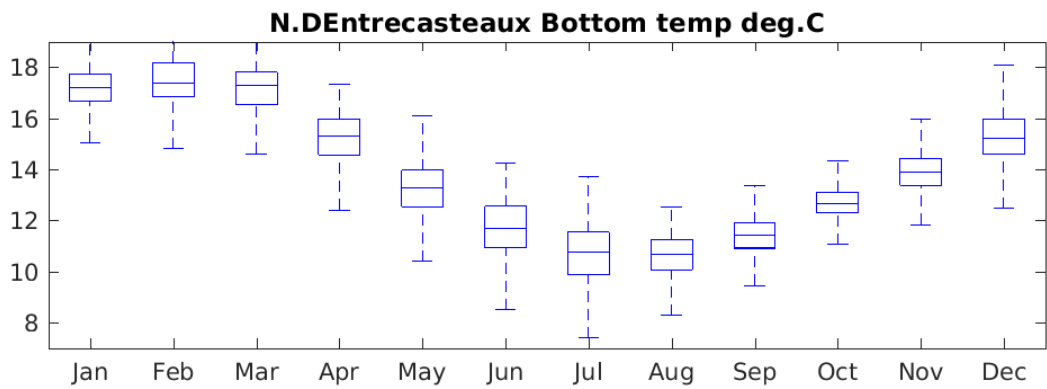
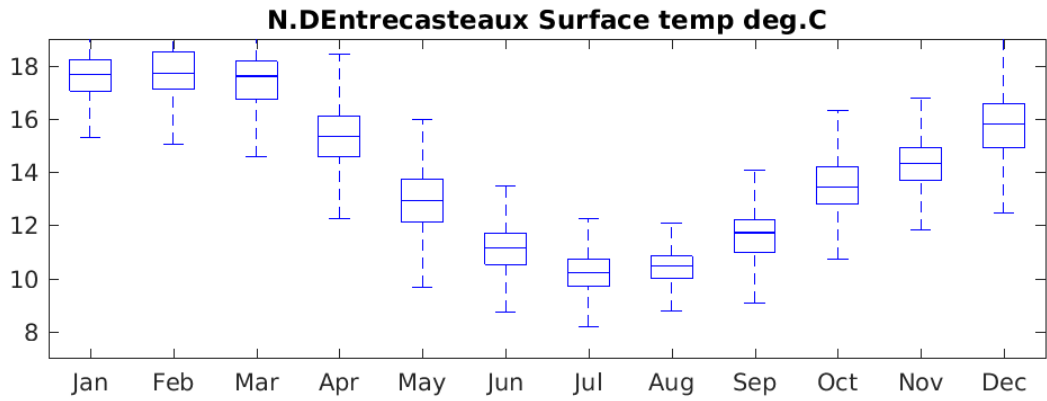
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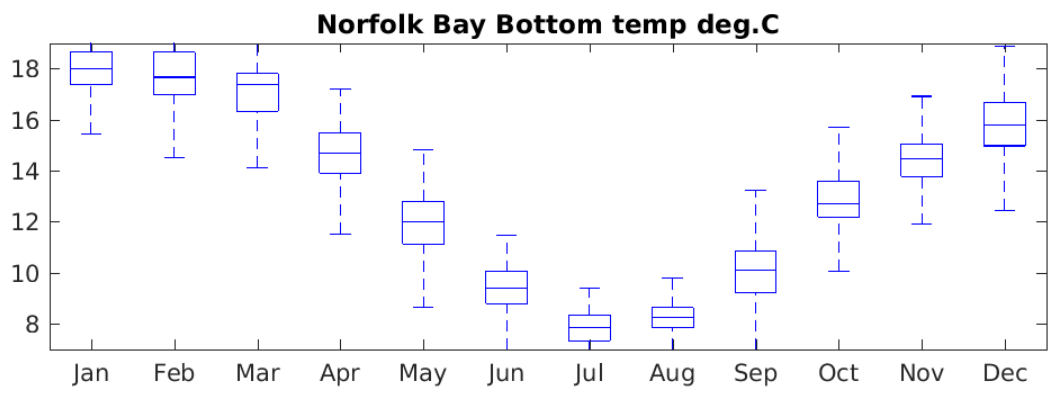
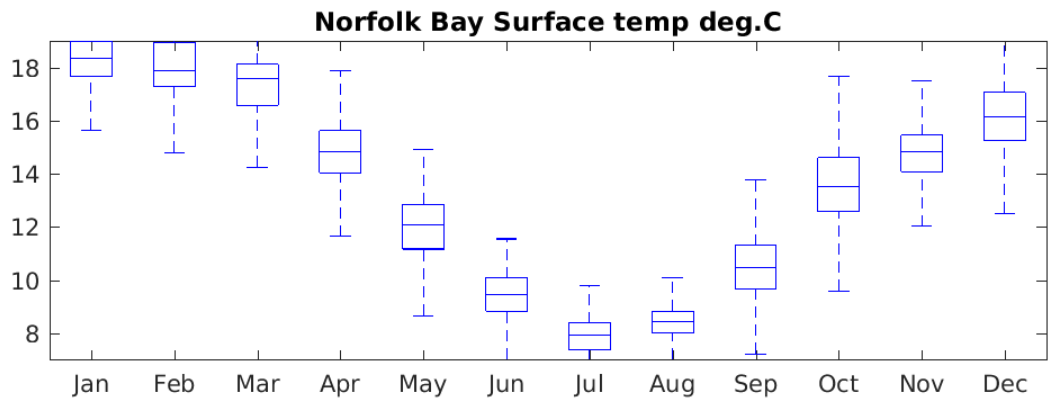
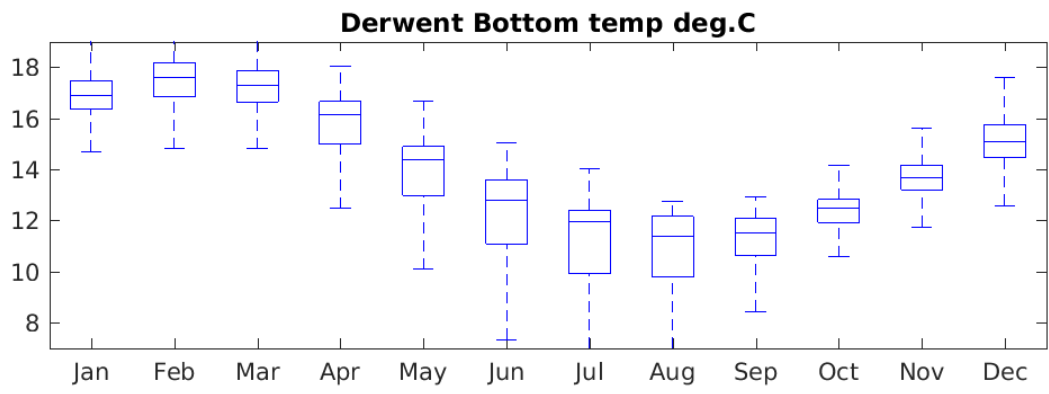
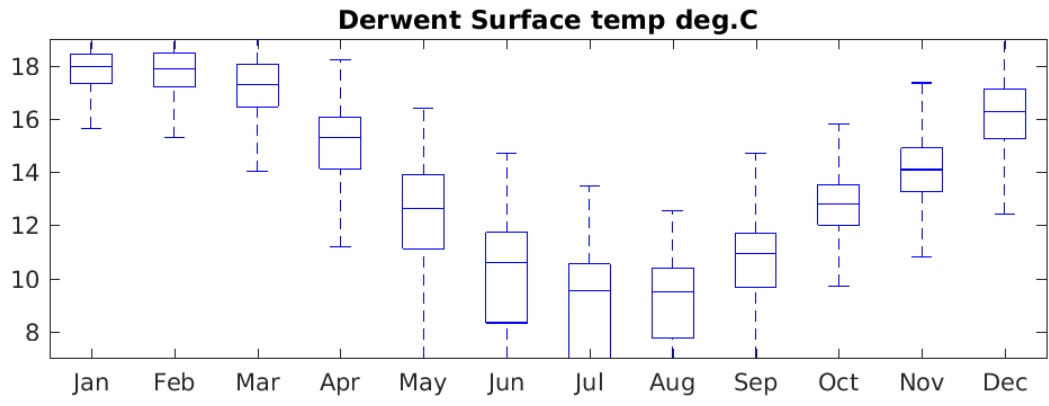
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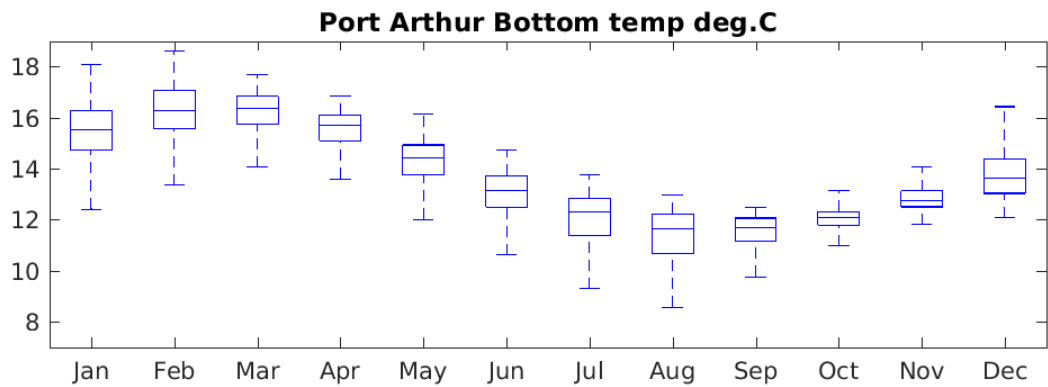
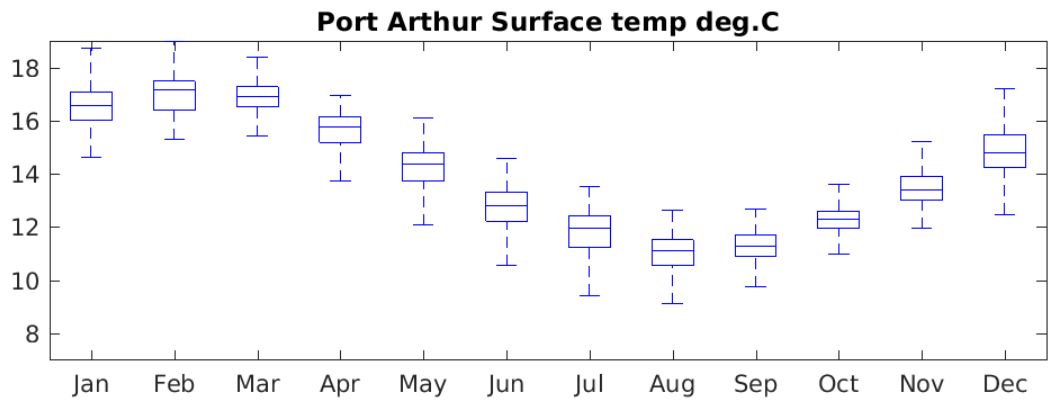
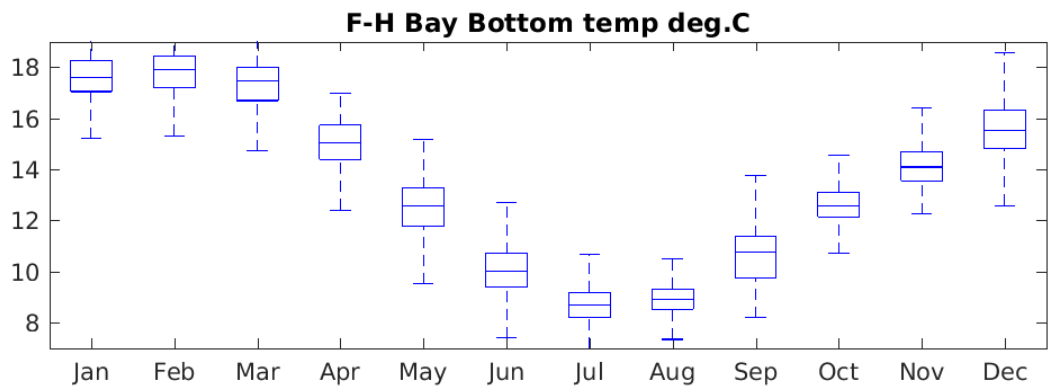
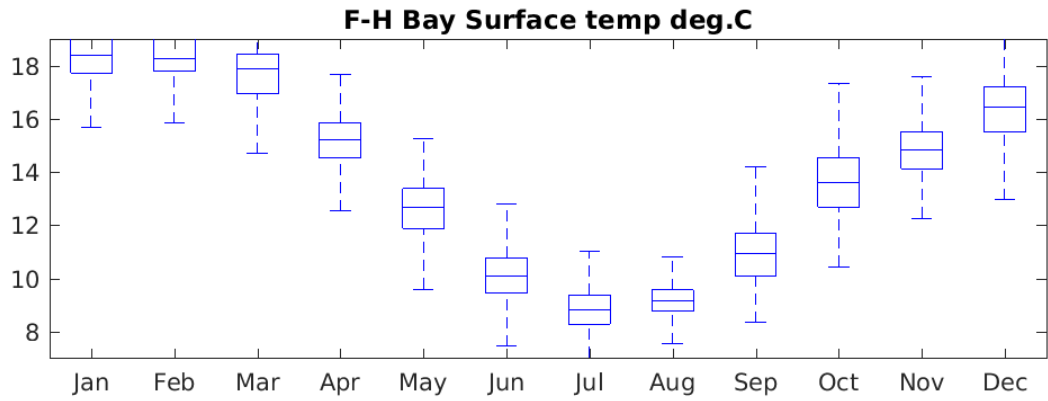


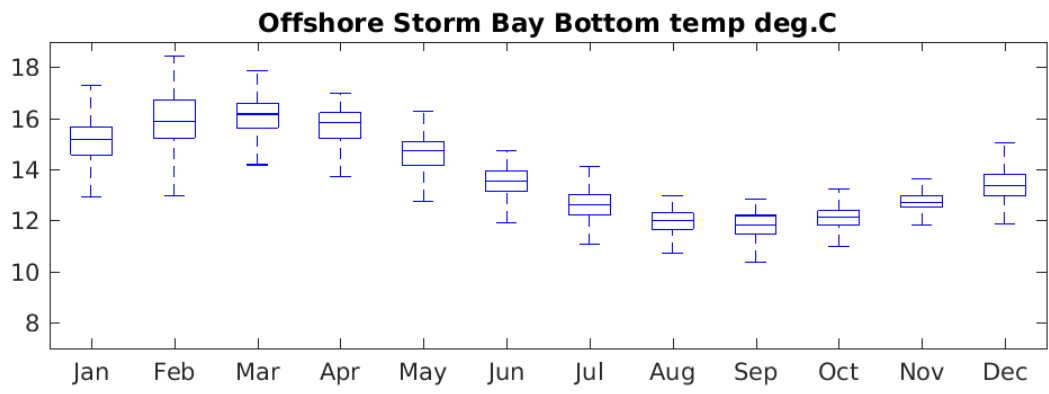
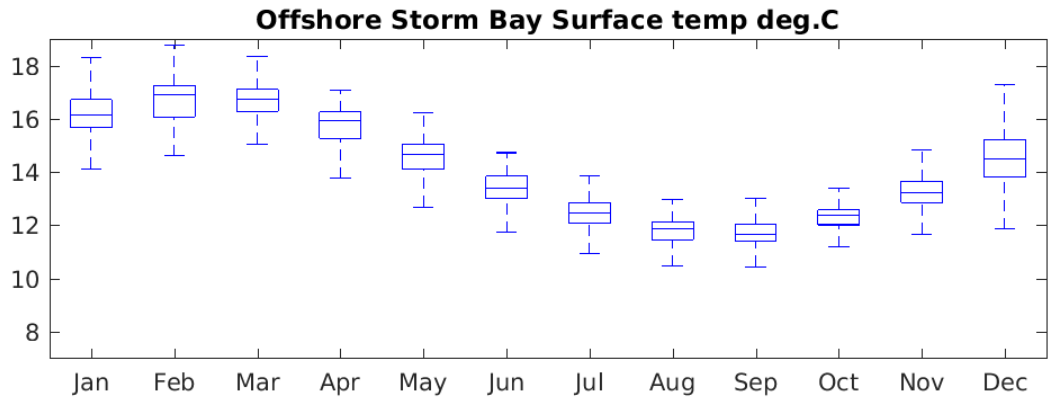


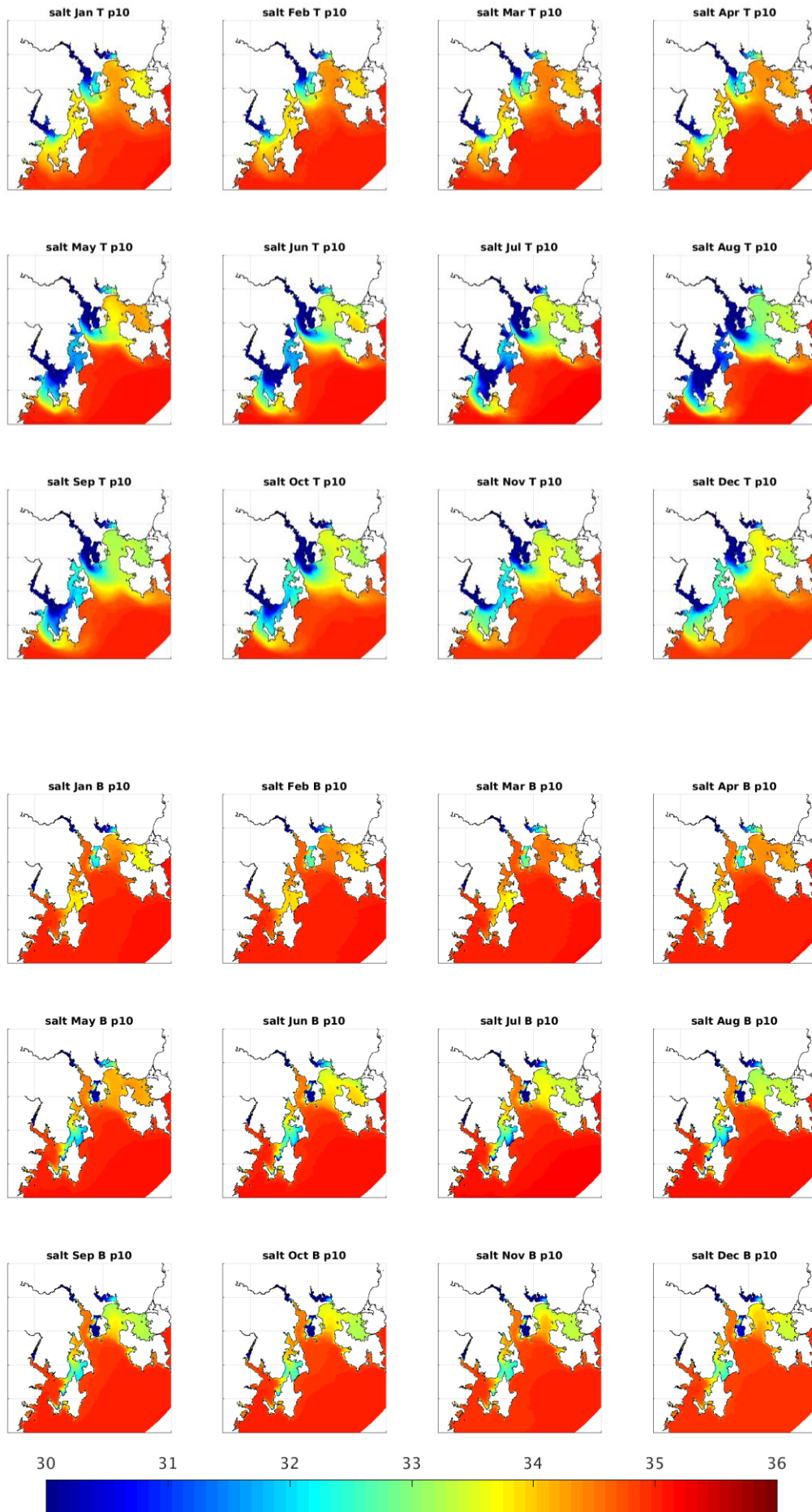




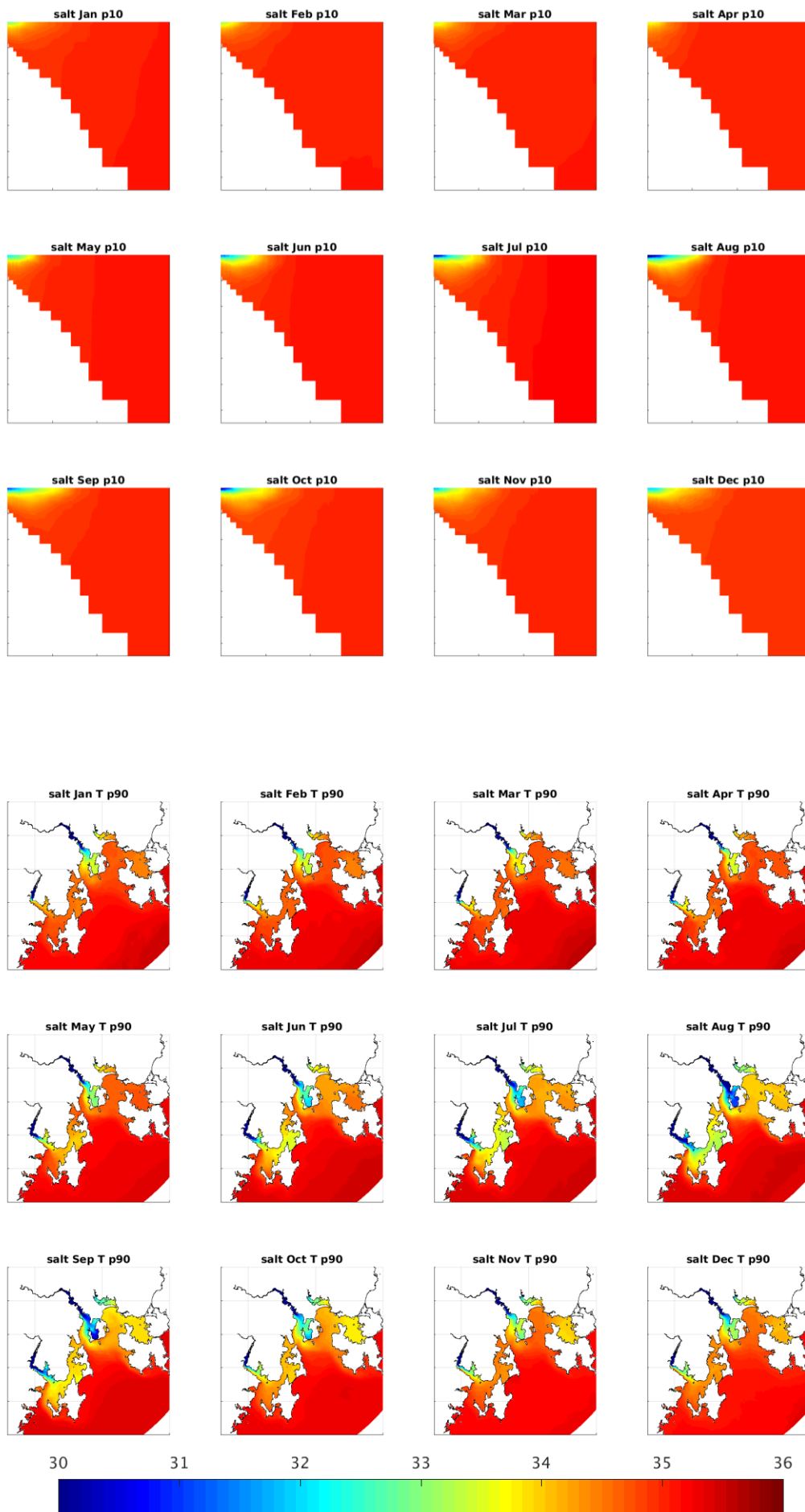




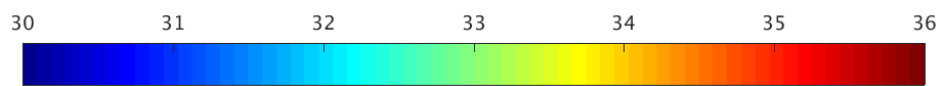
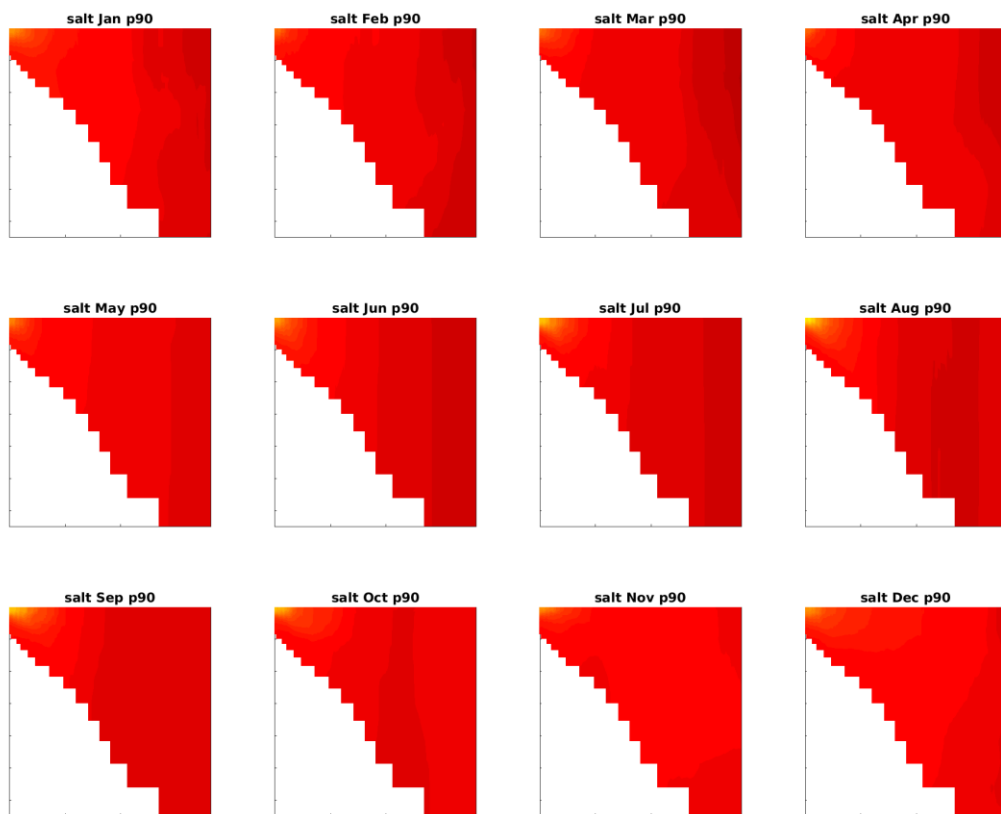
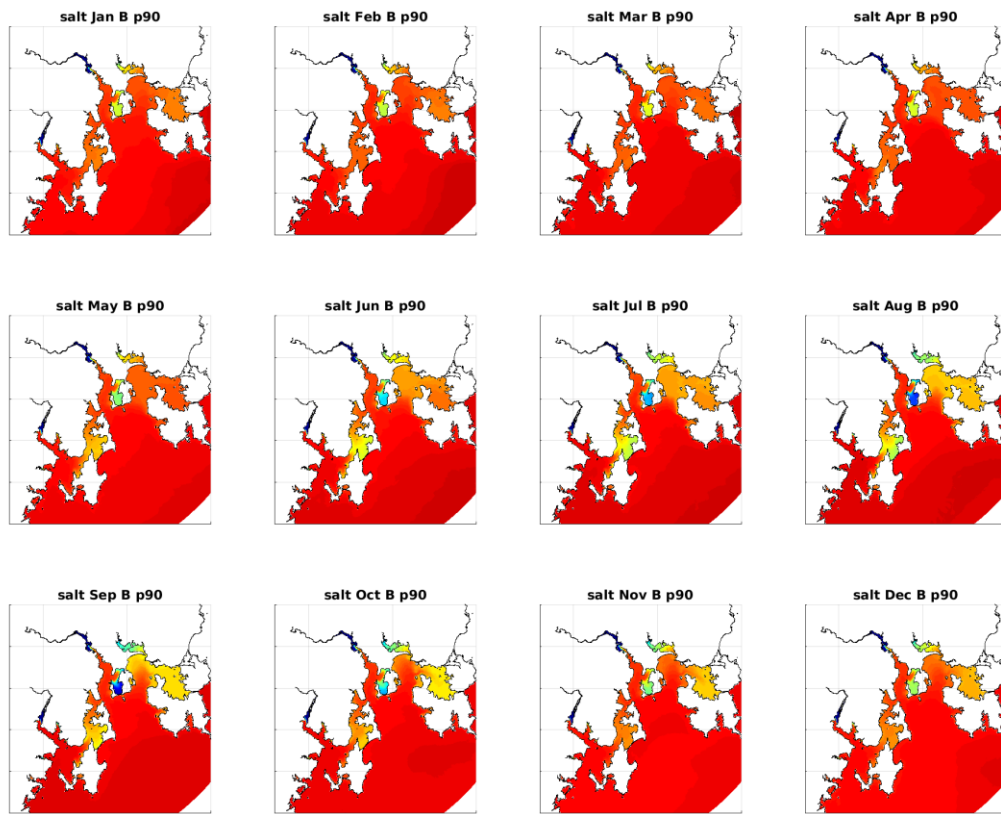




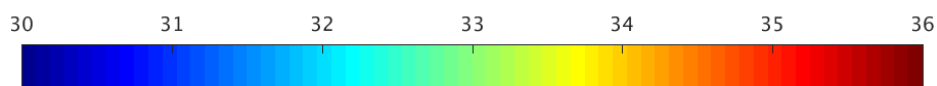
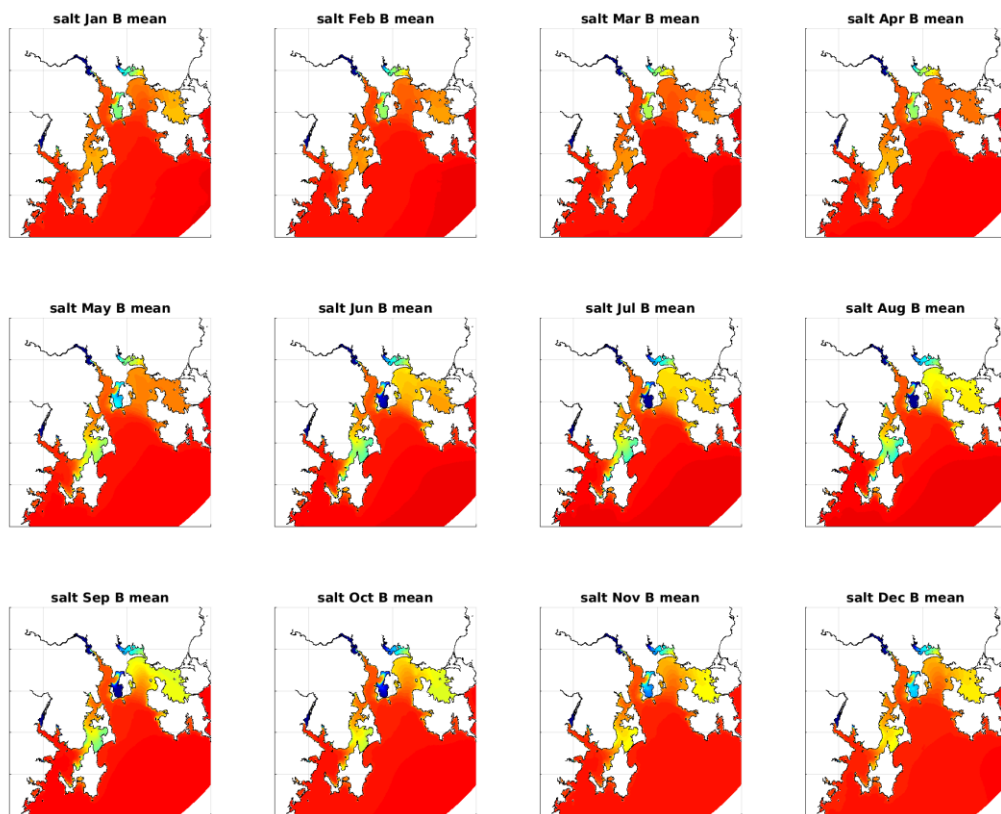
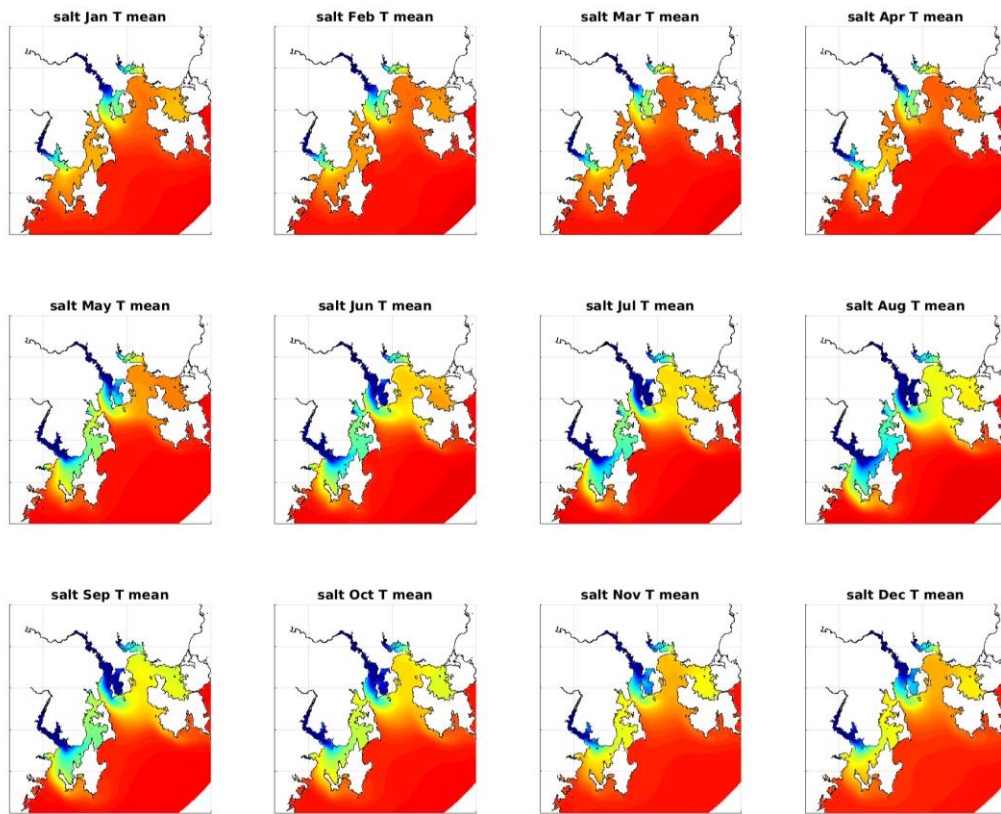
Salinity PSU



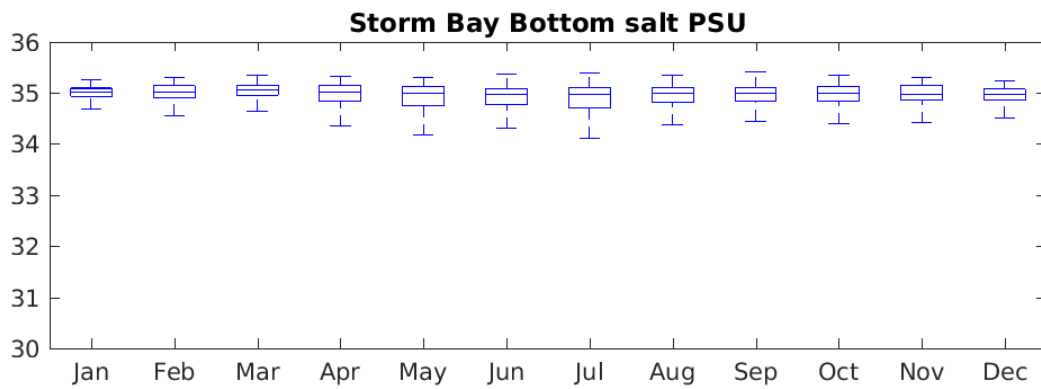
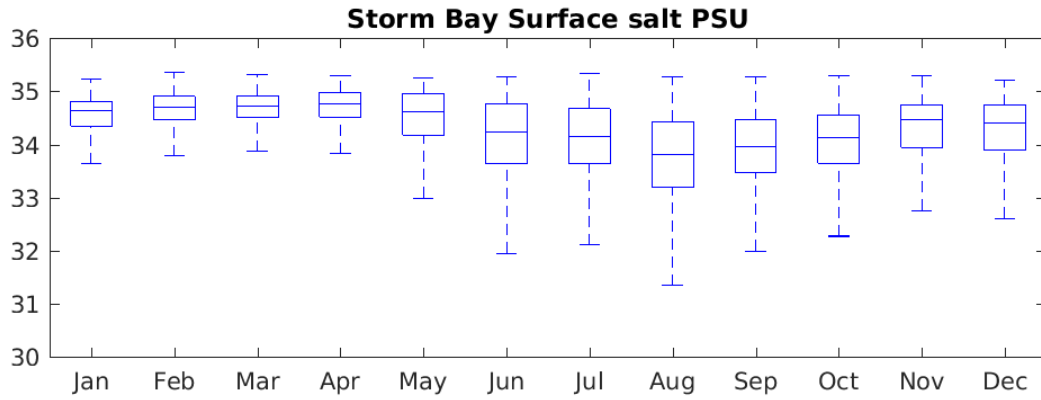
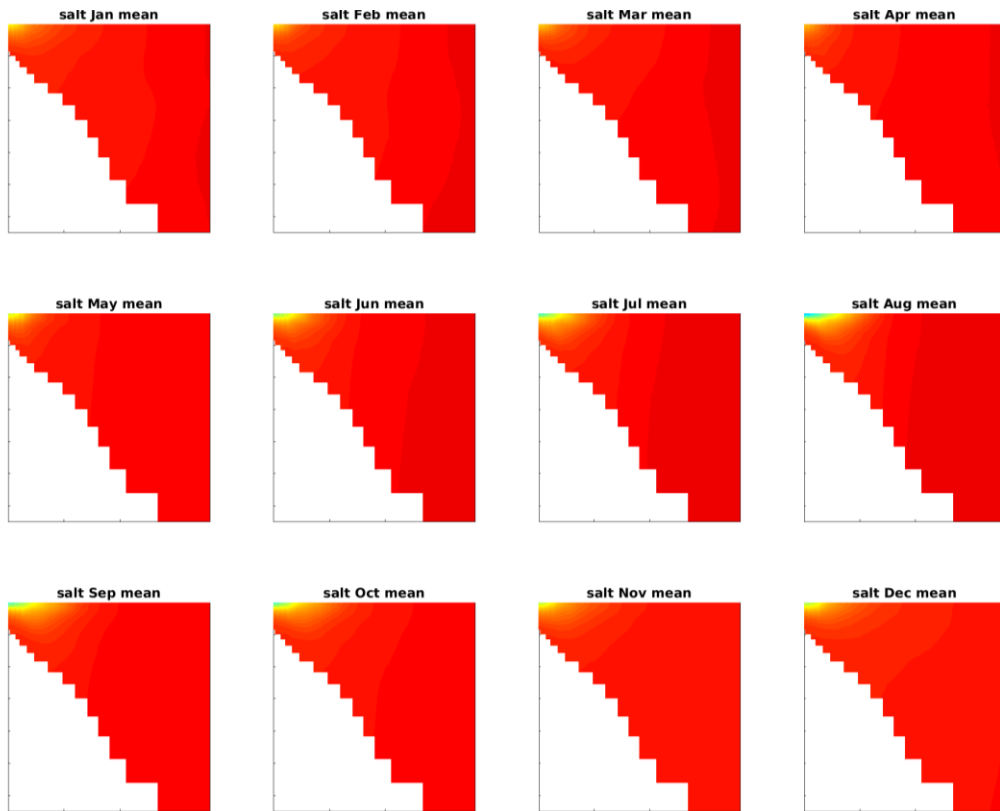
Salinity PSU



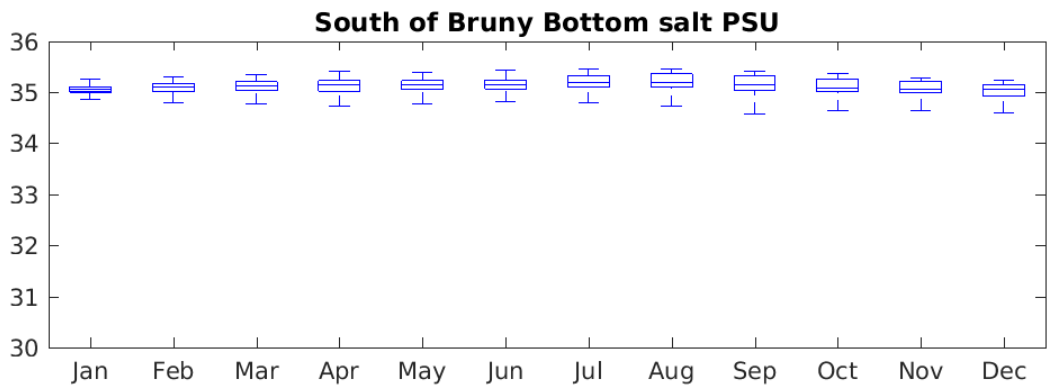
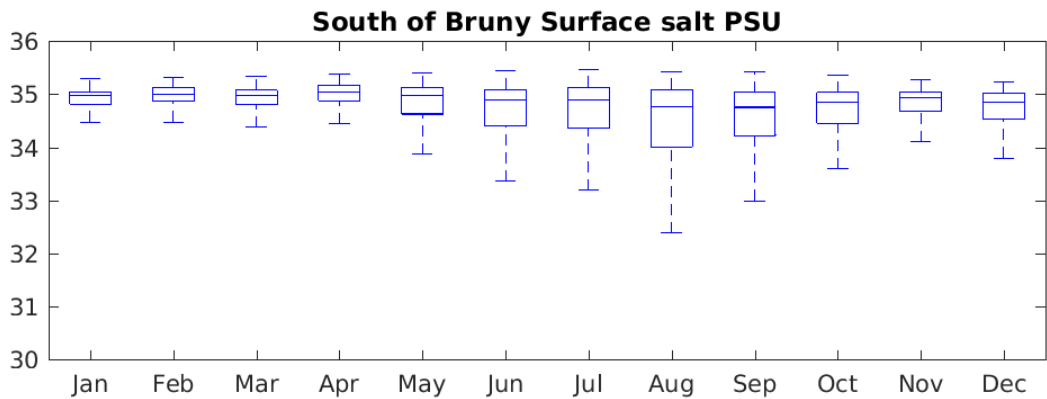
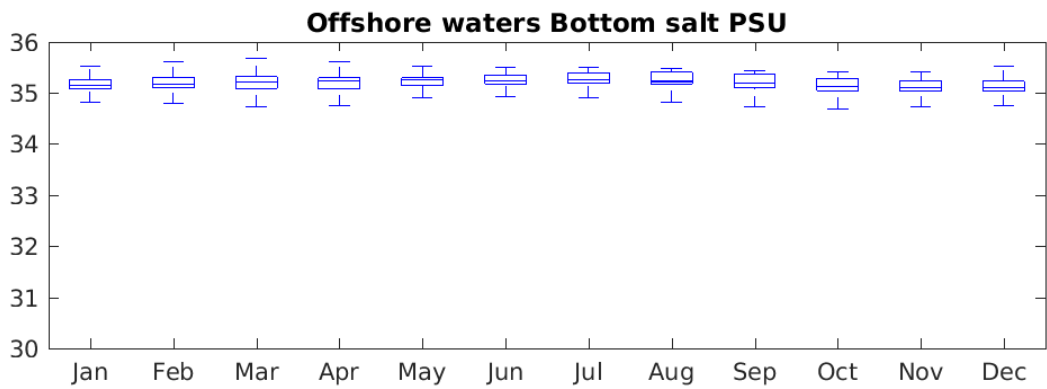
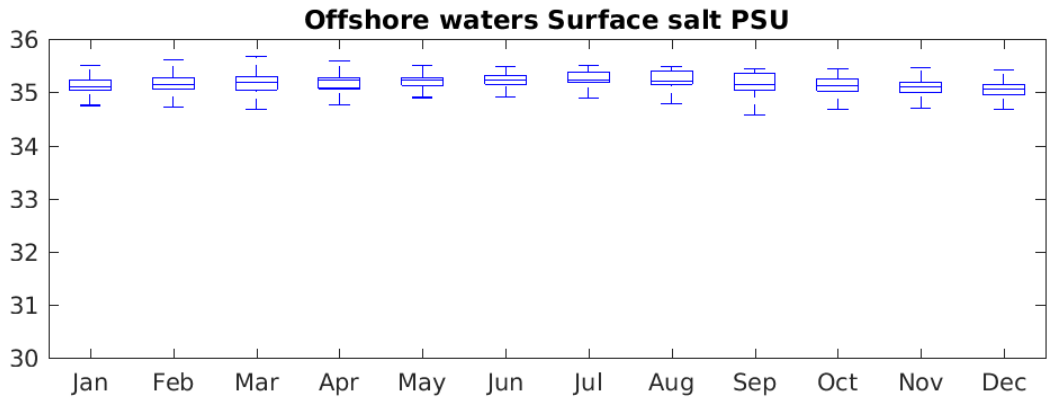
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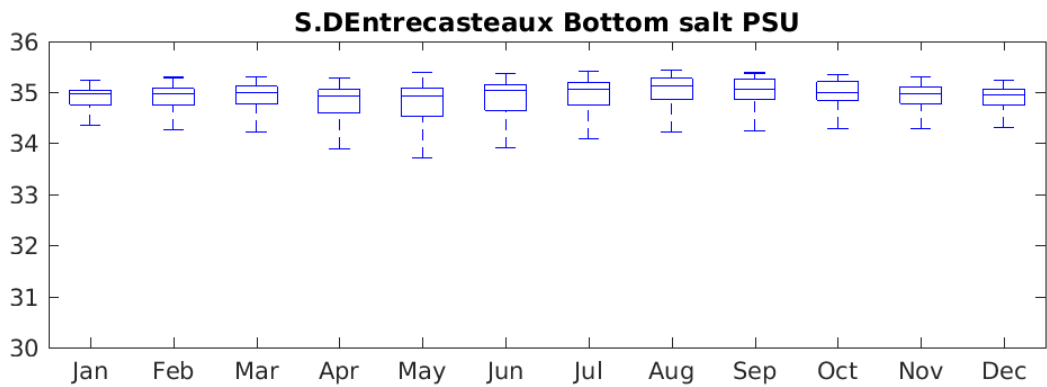
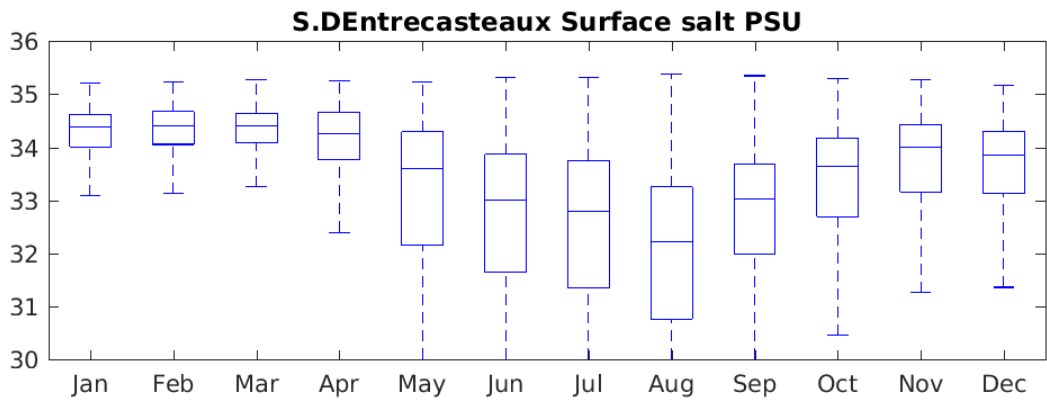
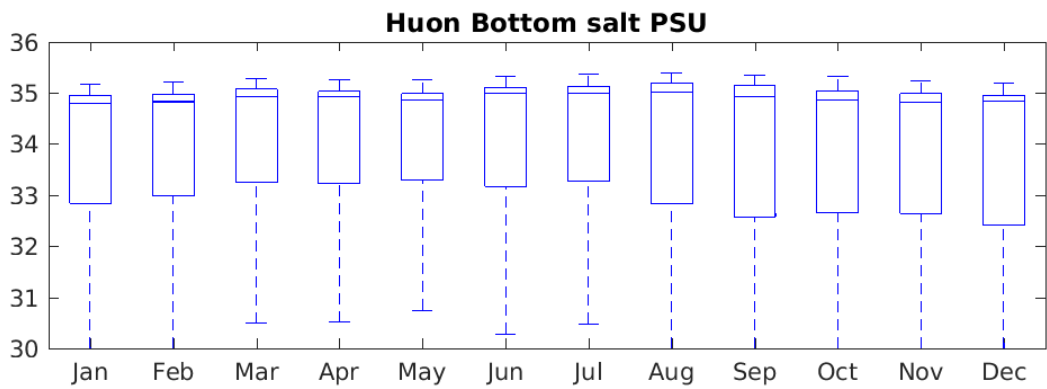
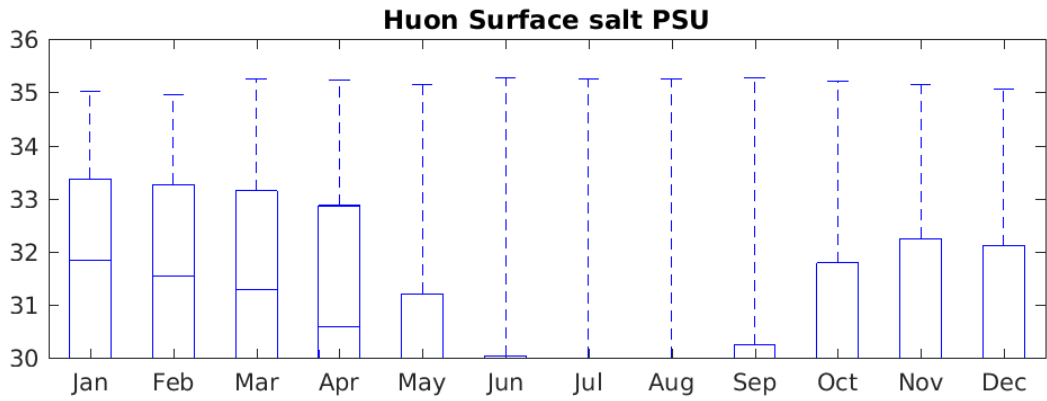


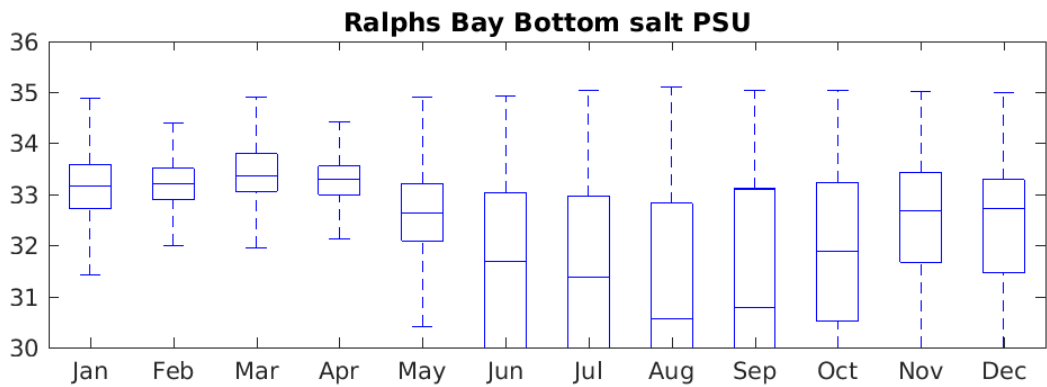
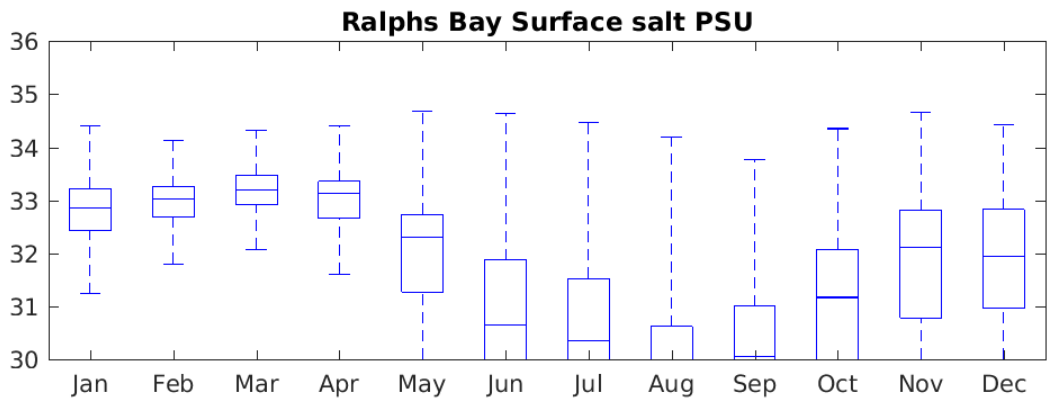
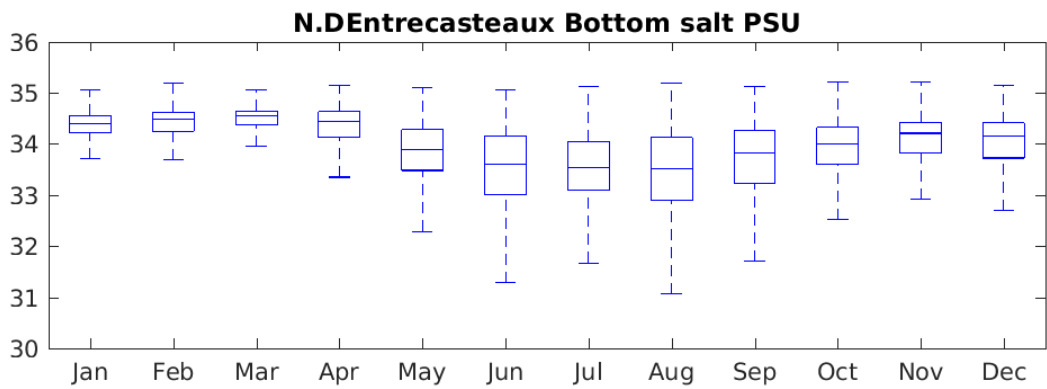
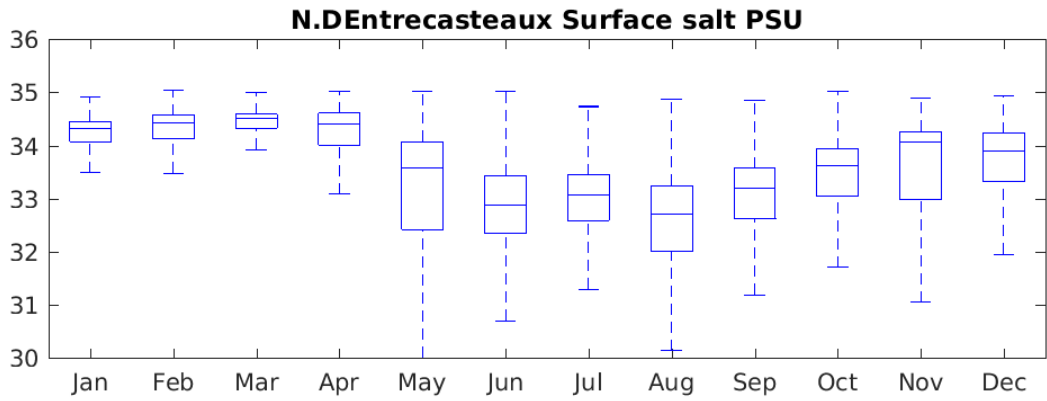
Salinity PSU

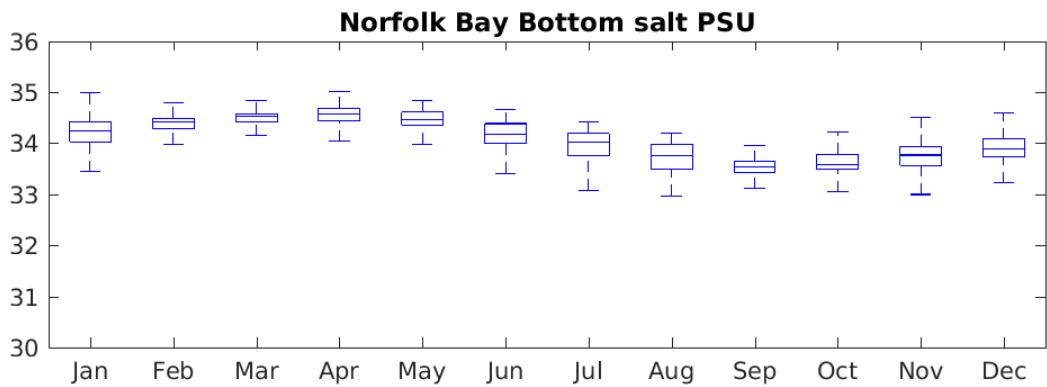
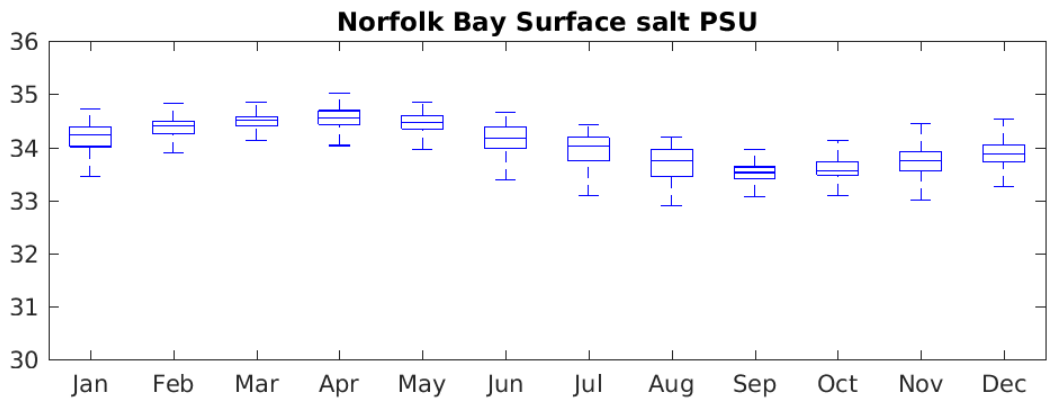
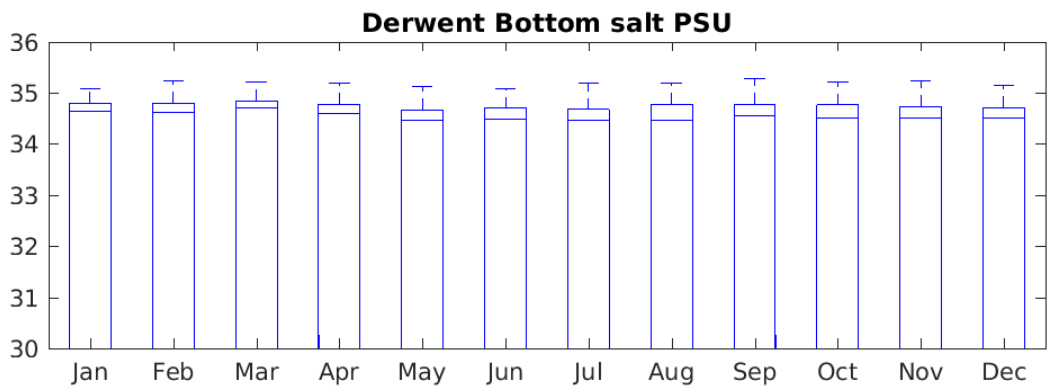
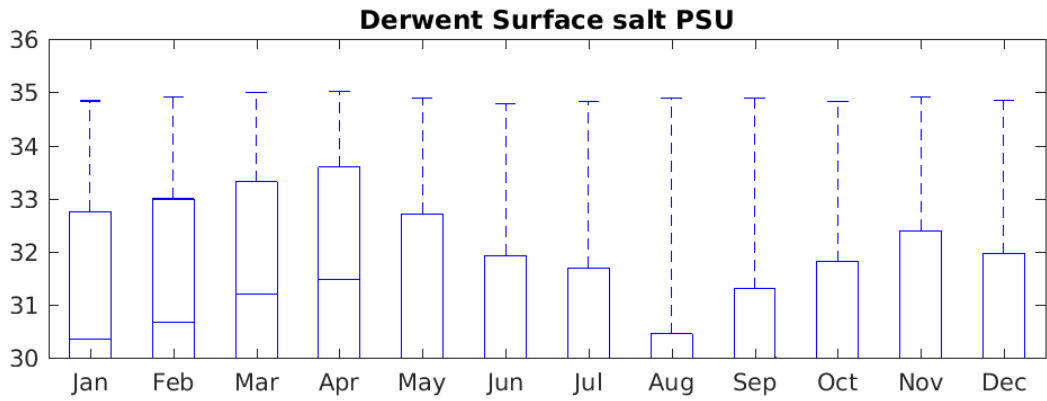


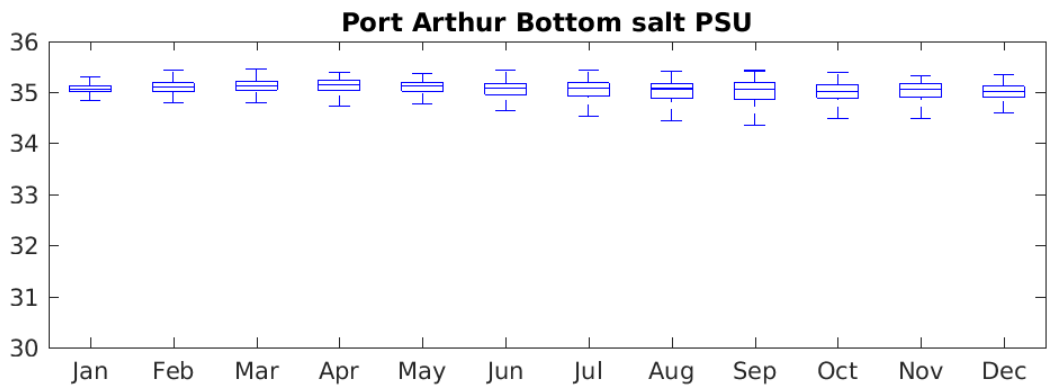
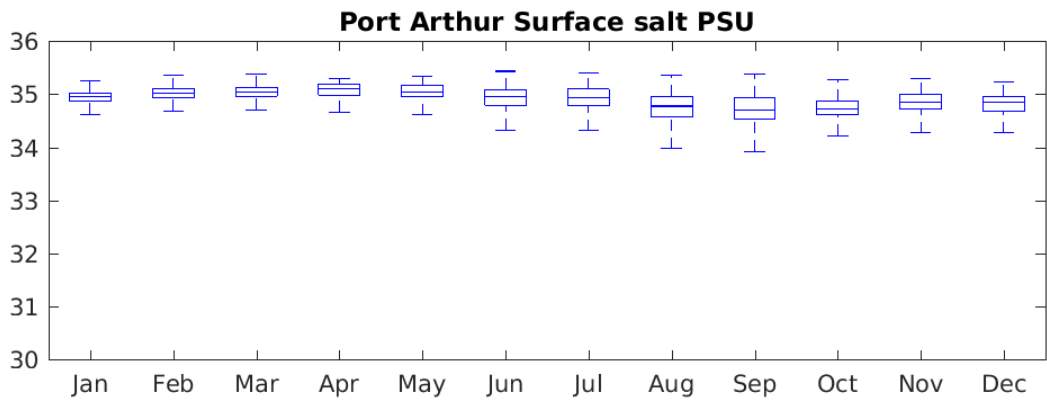
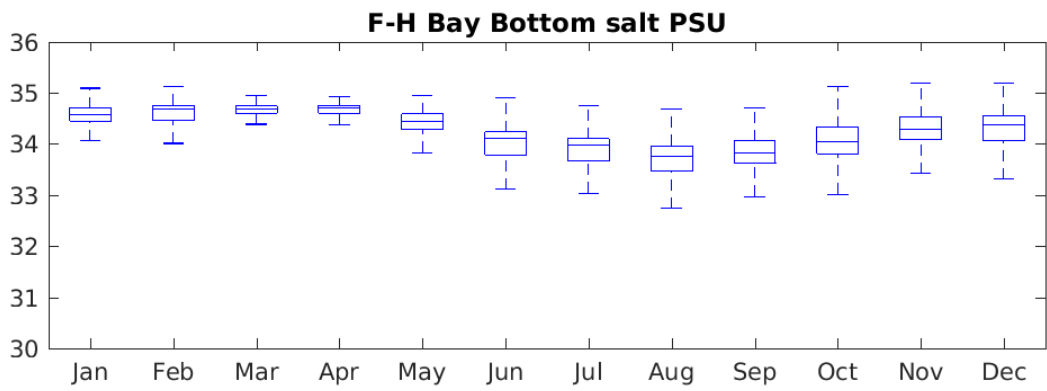
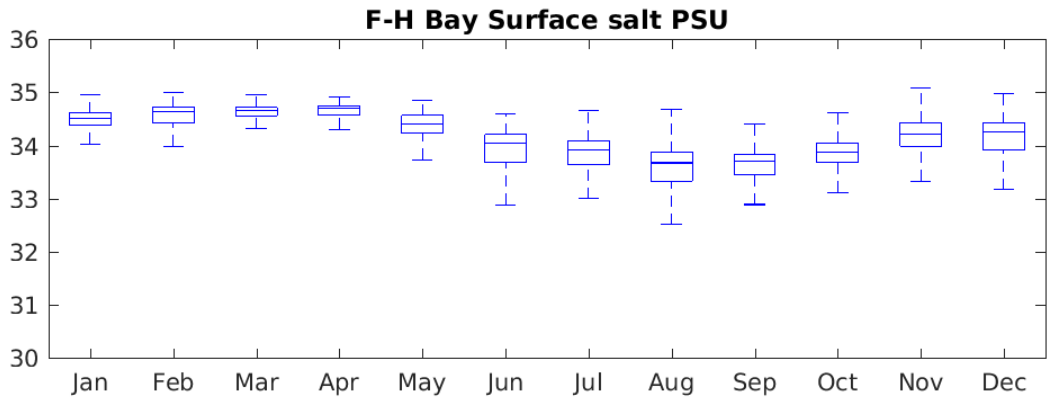


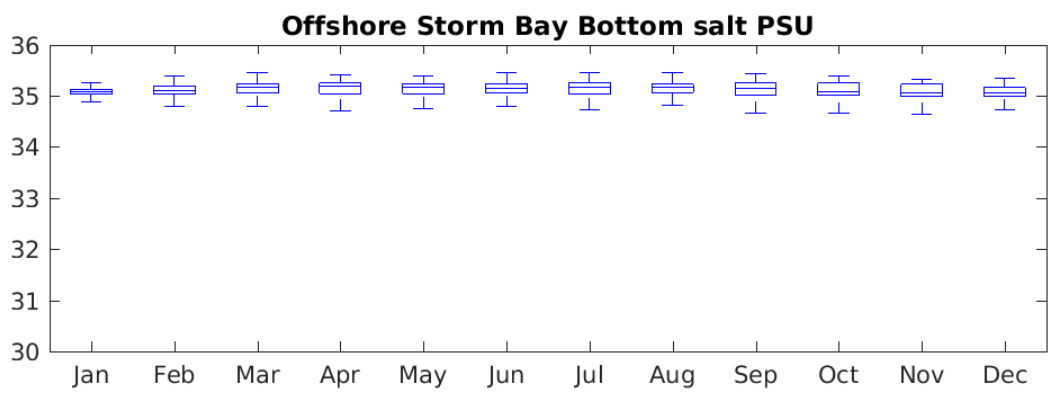
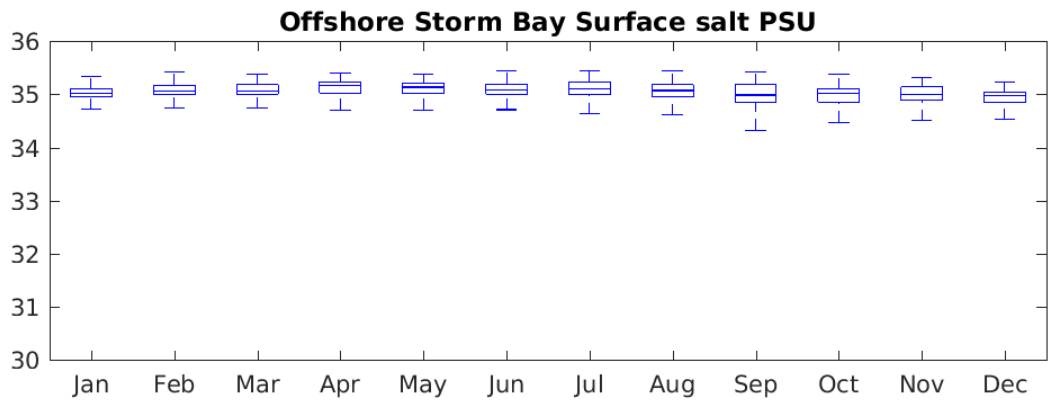


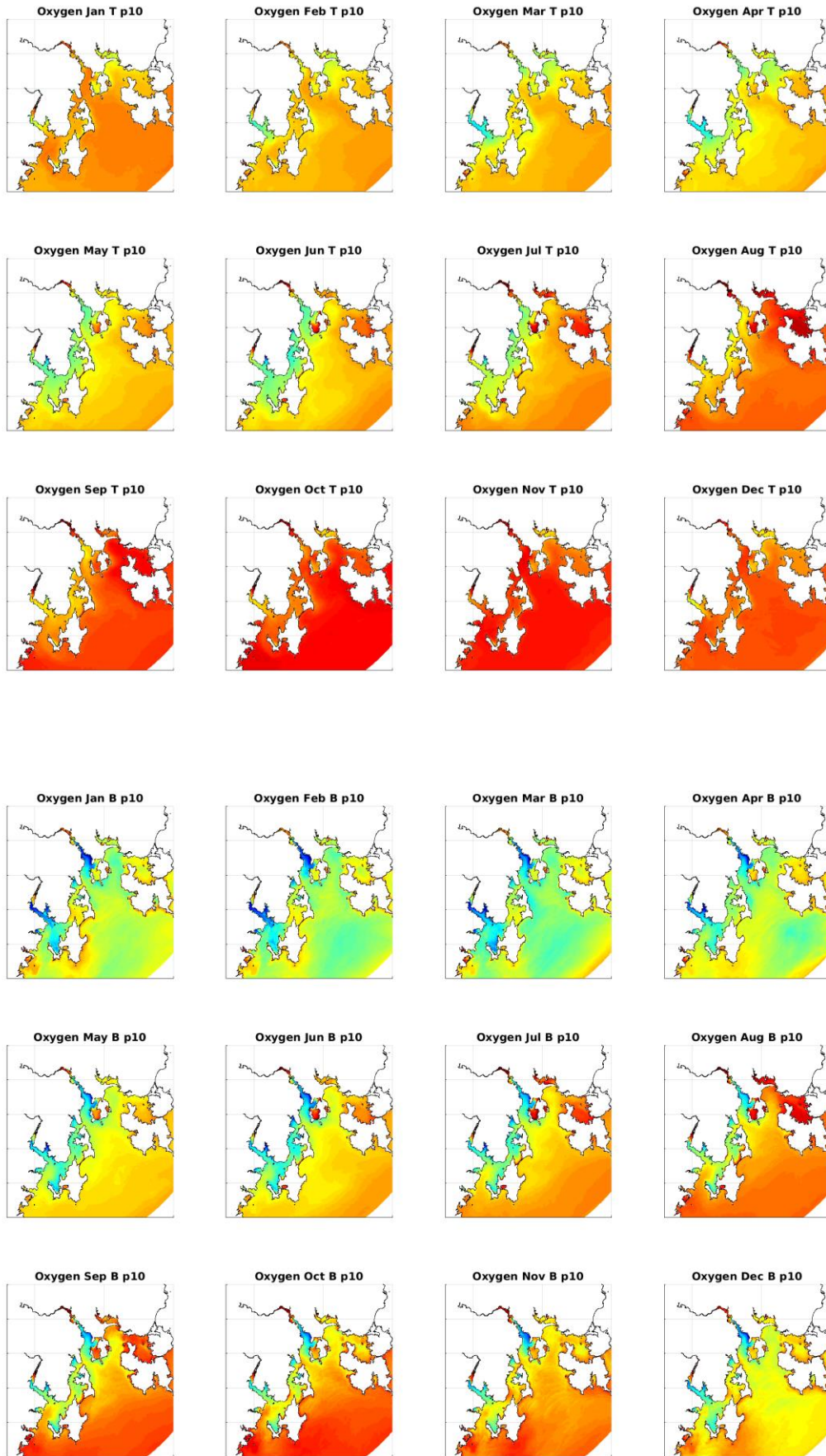


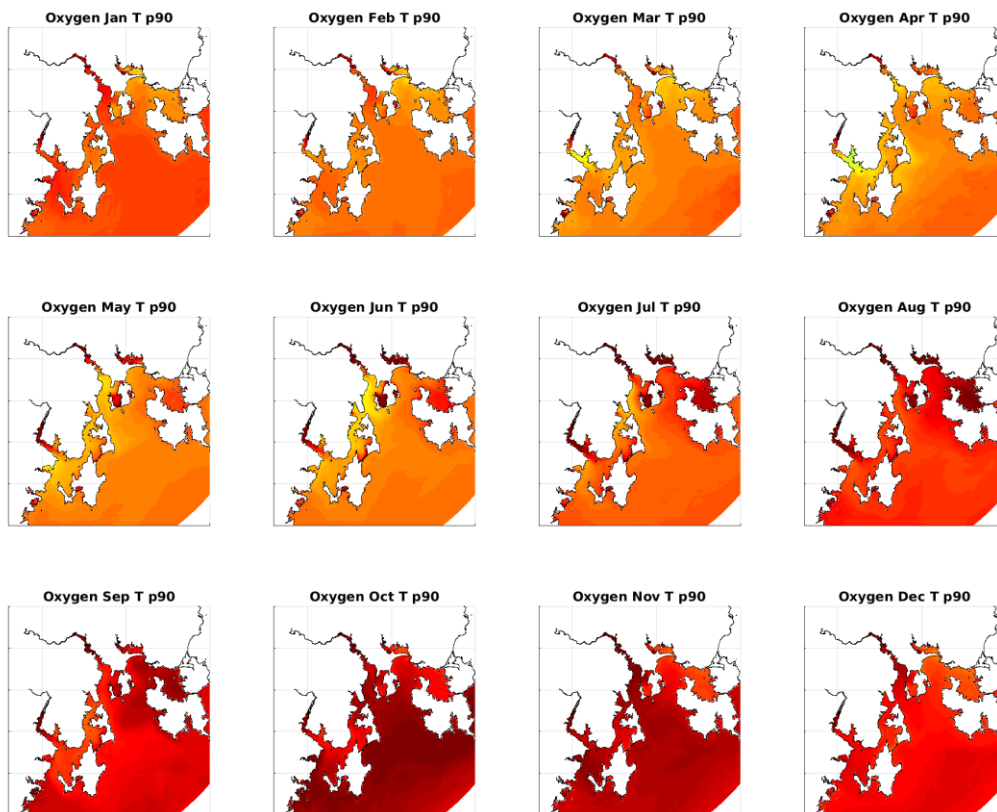
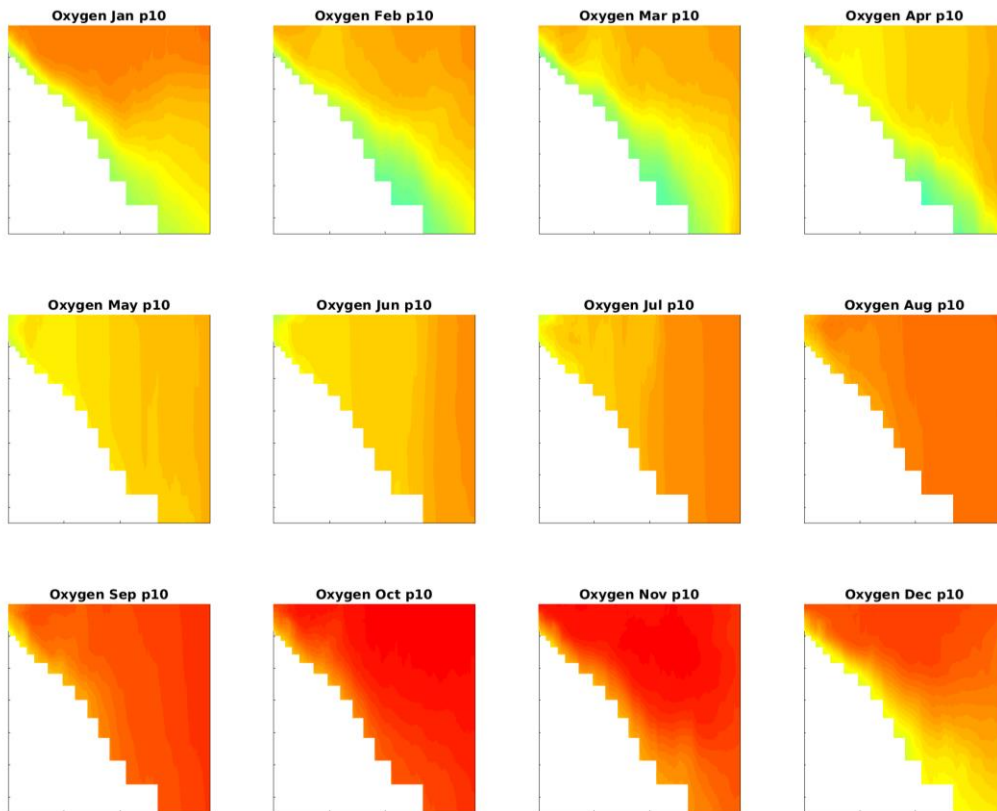




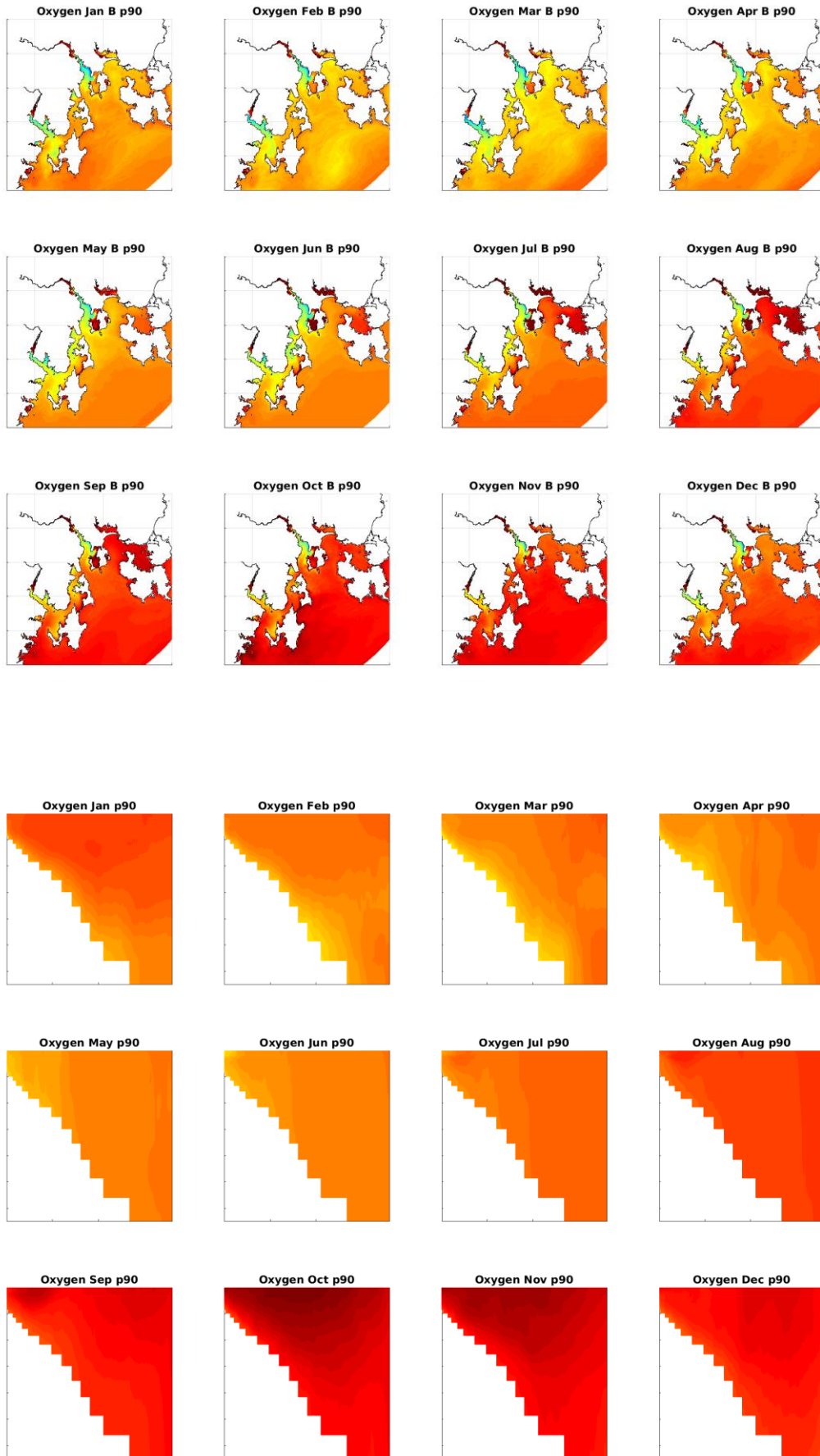


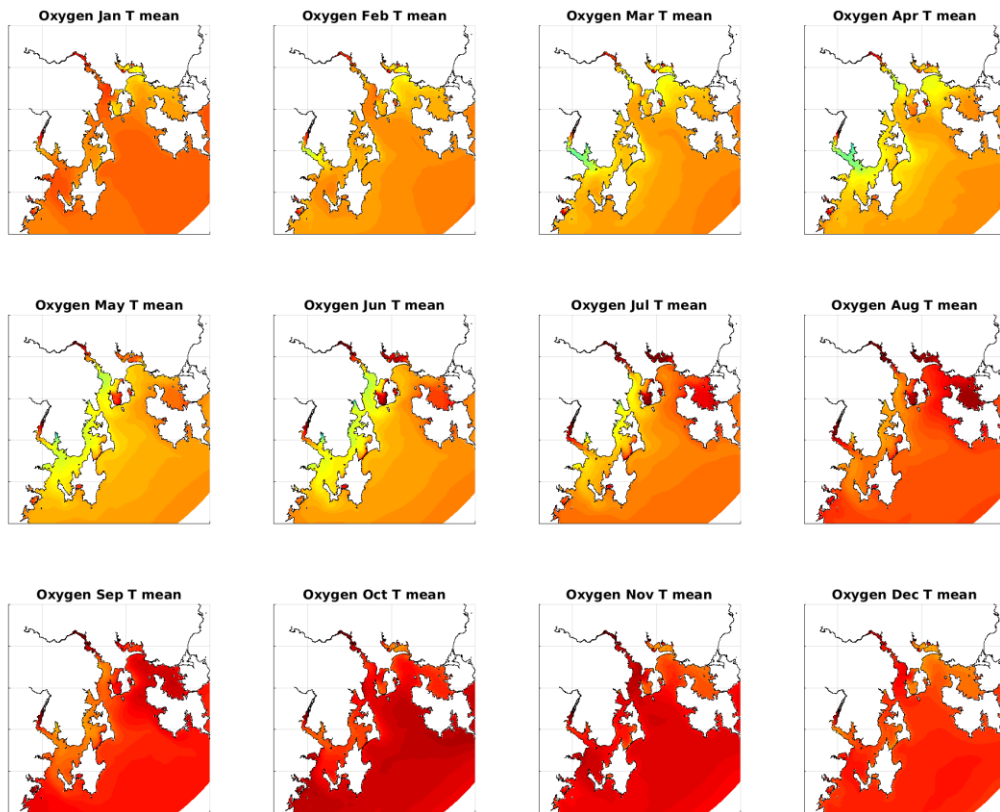
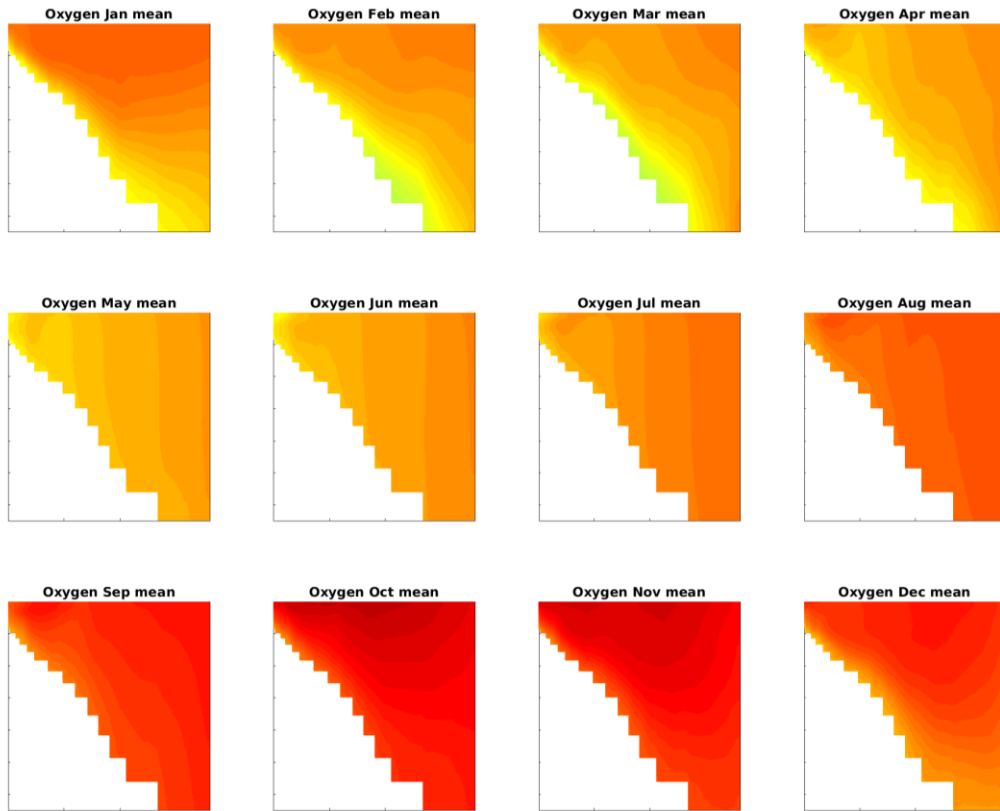


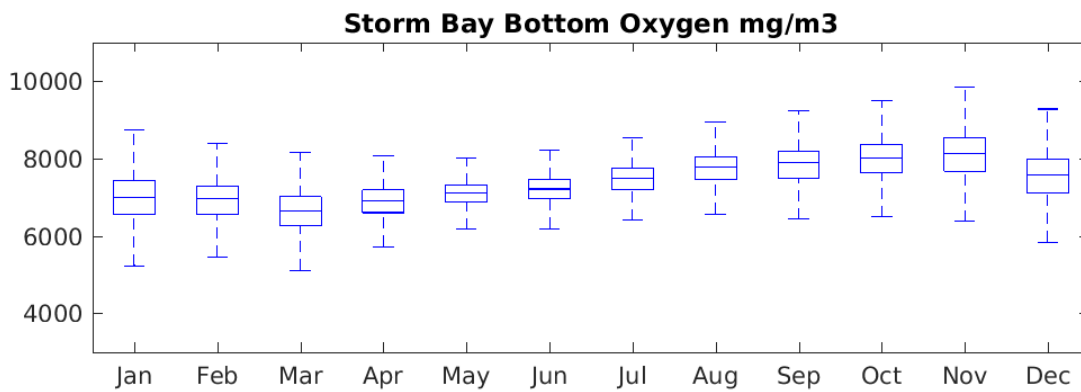
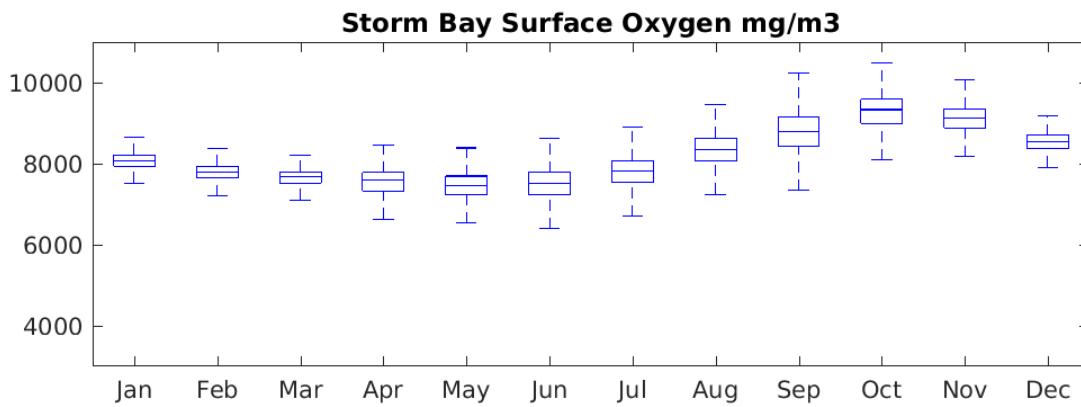
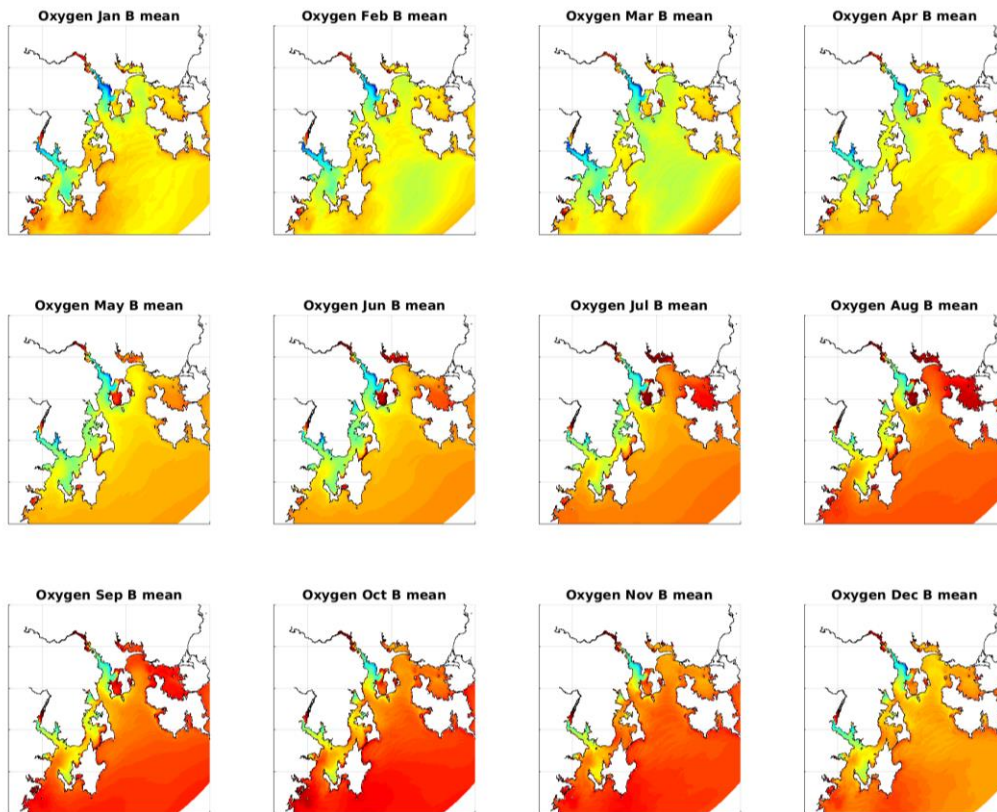




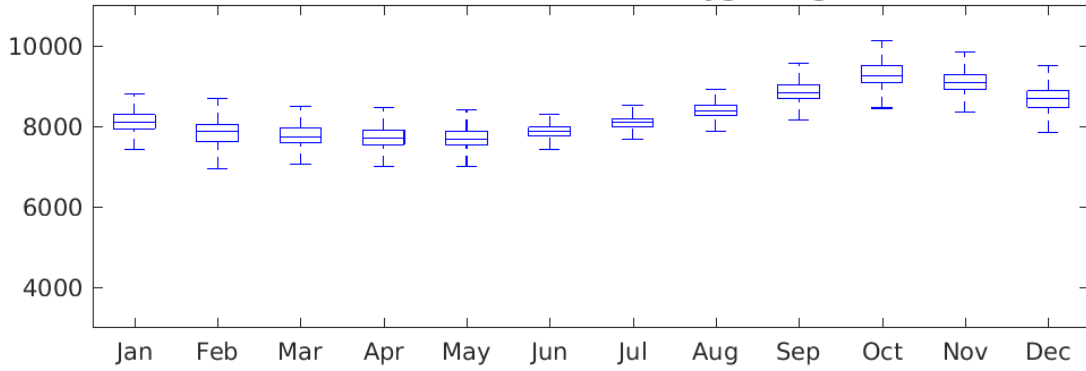




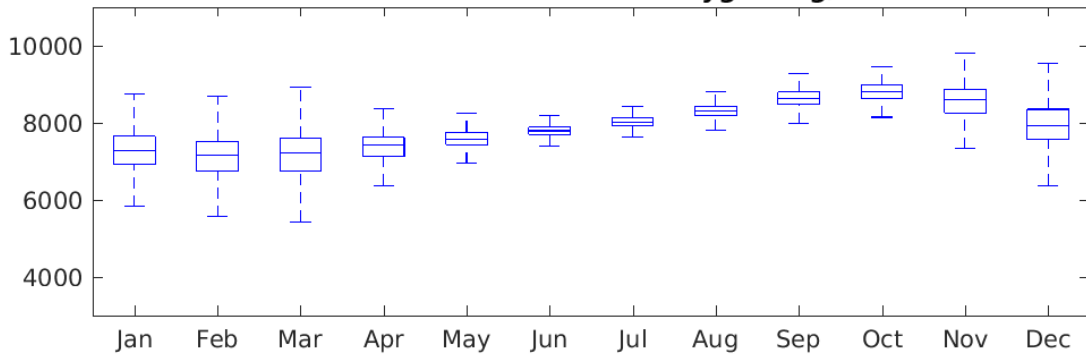




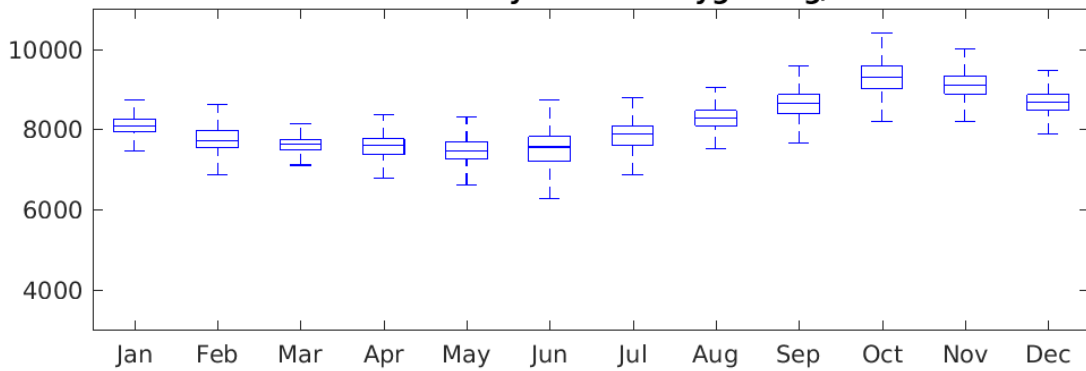
**Offshore waters Surface Oxygen mg/m3**



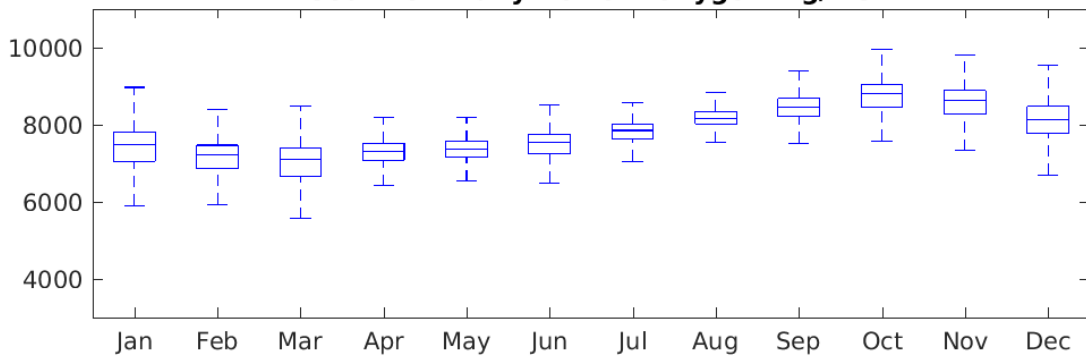
**Offshore waters Bottom Oxygen mg/m3**

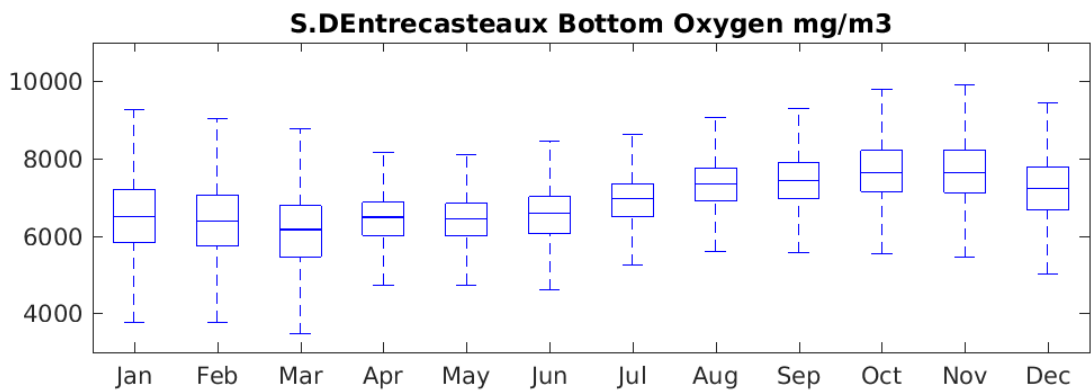
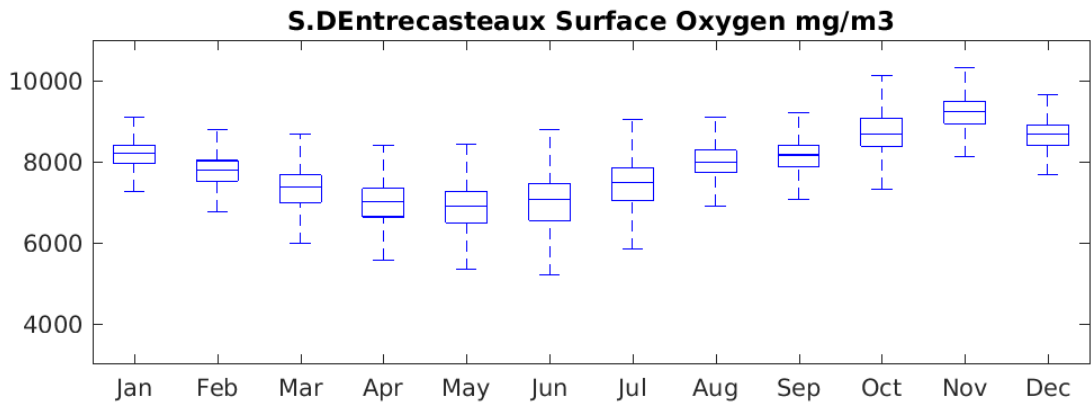
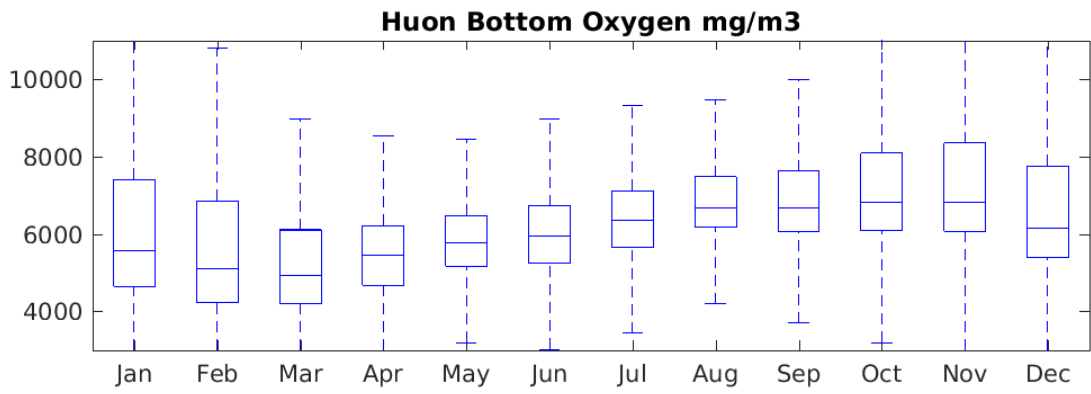
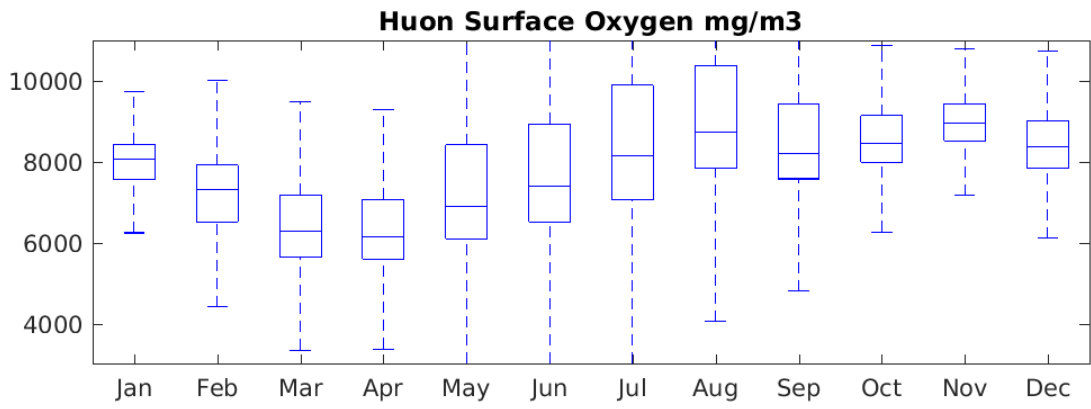


**South of Bruny Surface Oxygen mg/m3**

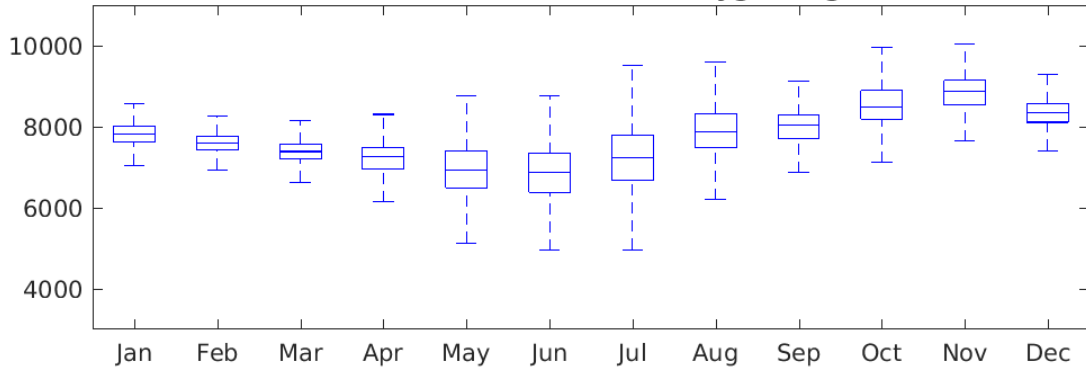


**South of Bruny Bottom Oxygen mg/m3**

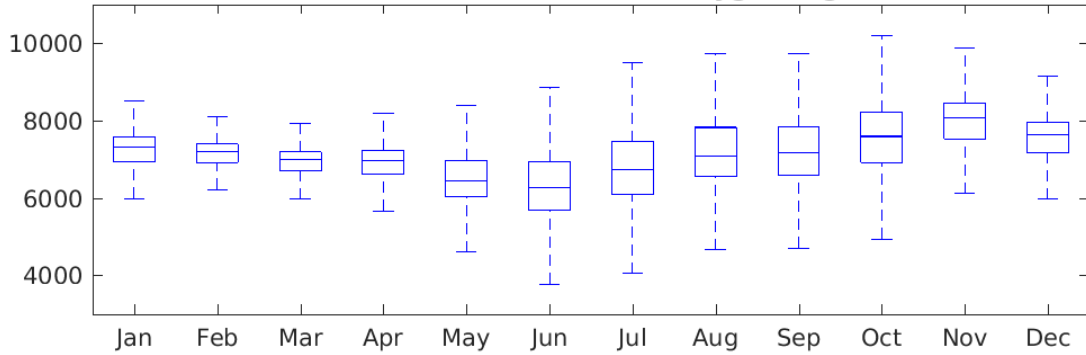




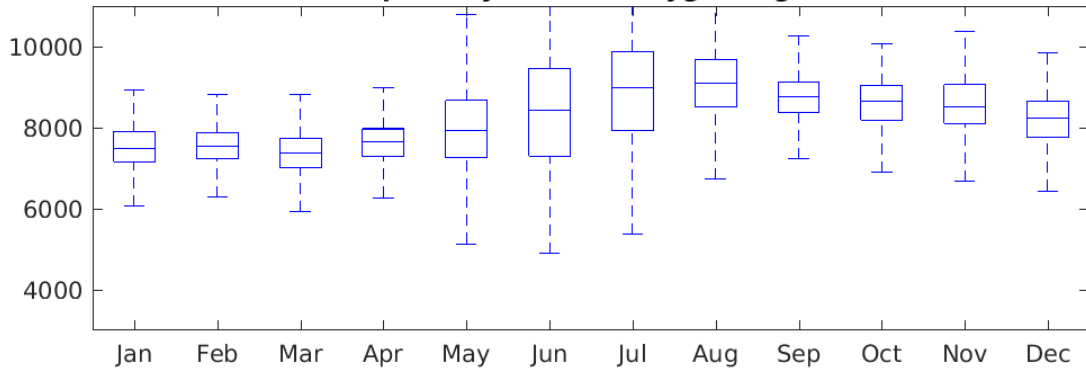
**N.DEntrecasteaux Surface Oxygen mg/m3**



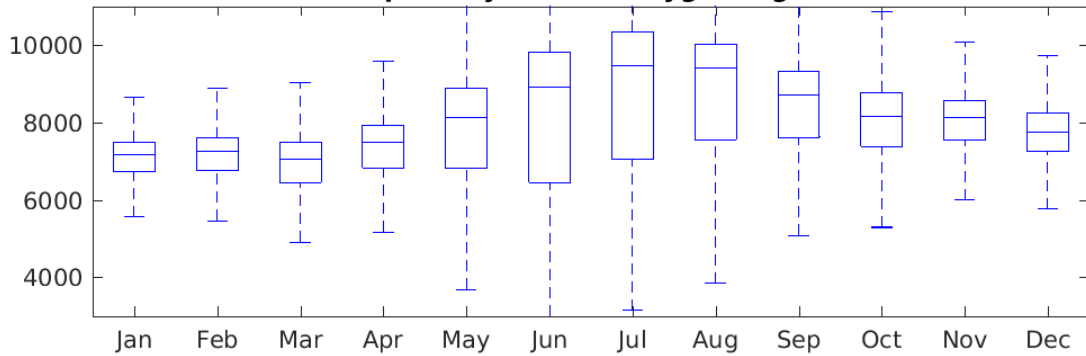
**N.DEntrecasteaux Bottom Oxygen mg/m3**

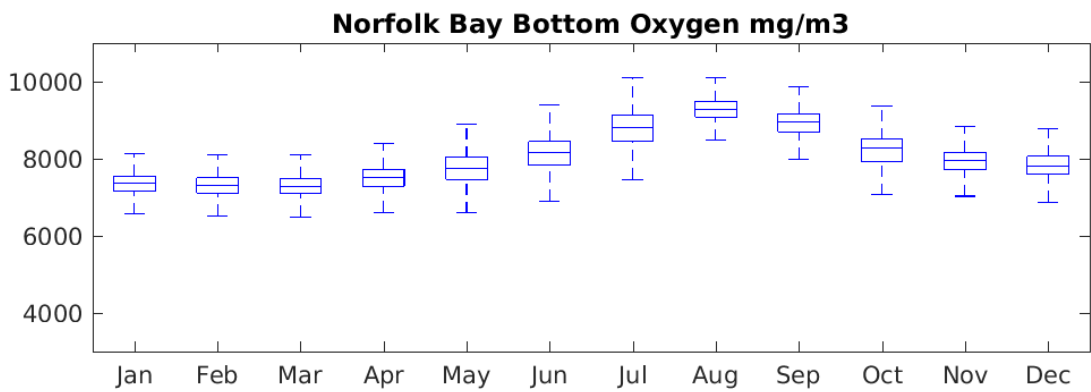
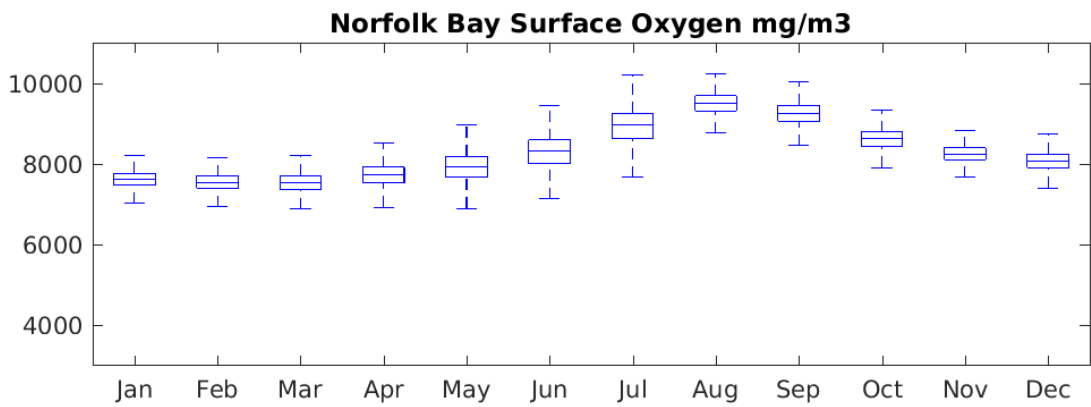
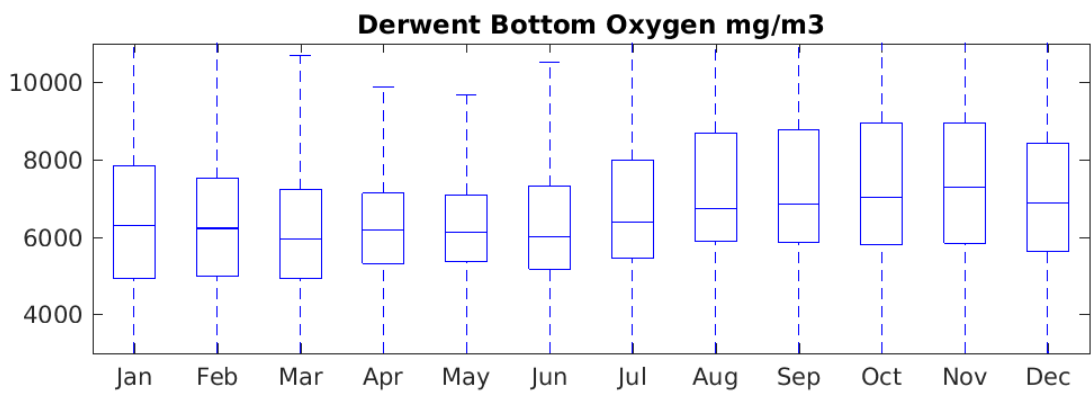
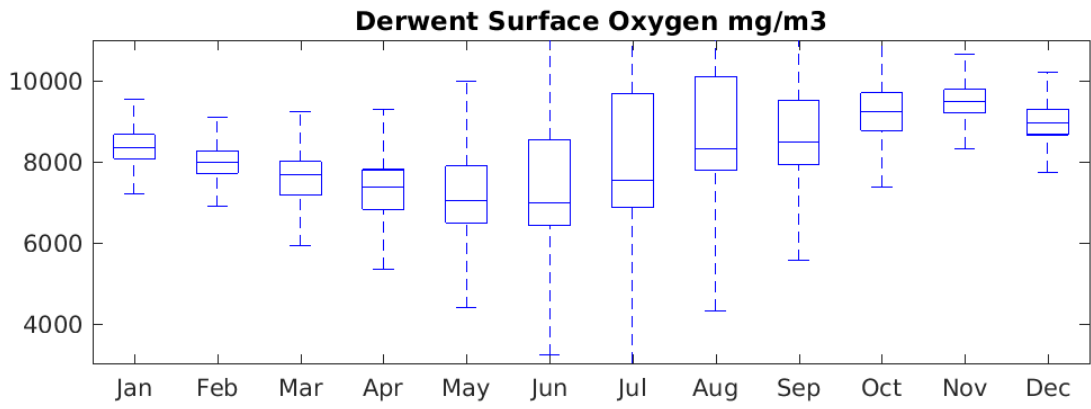


**Ralphps Bay Surface Oxygen mg/m3**

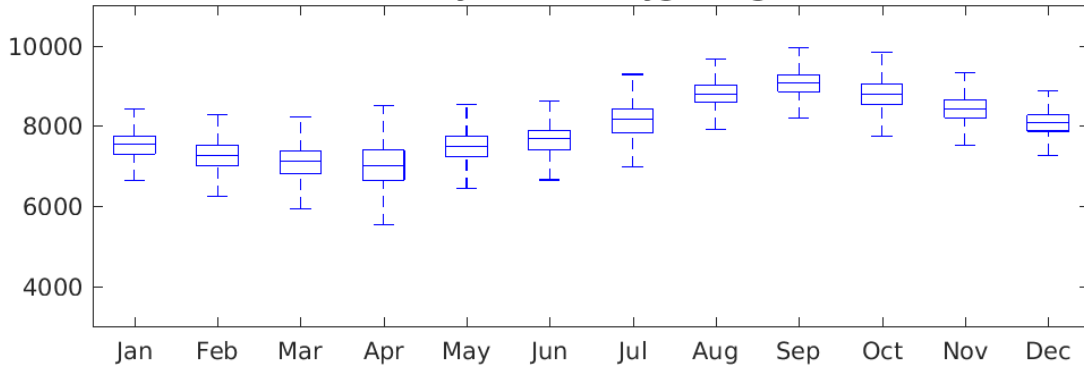


**Ralphps Bay Bottom Oxygen mg/m3**

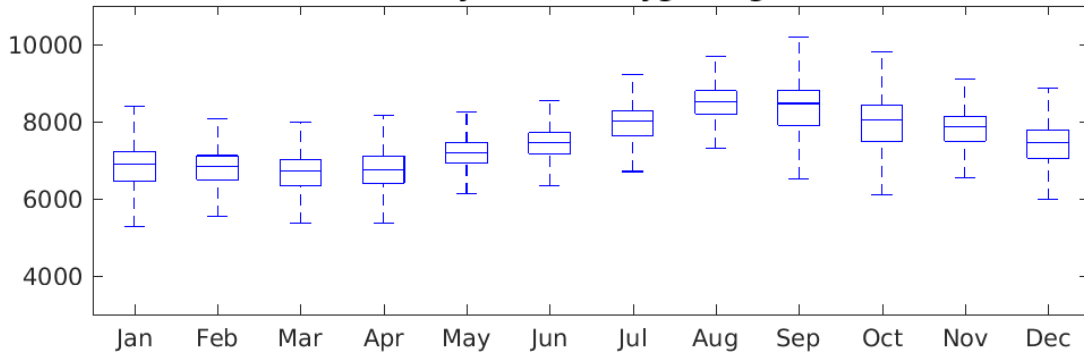




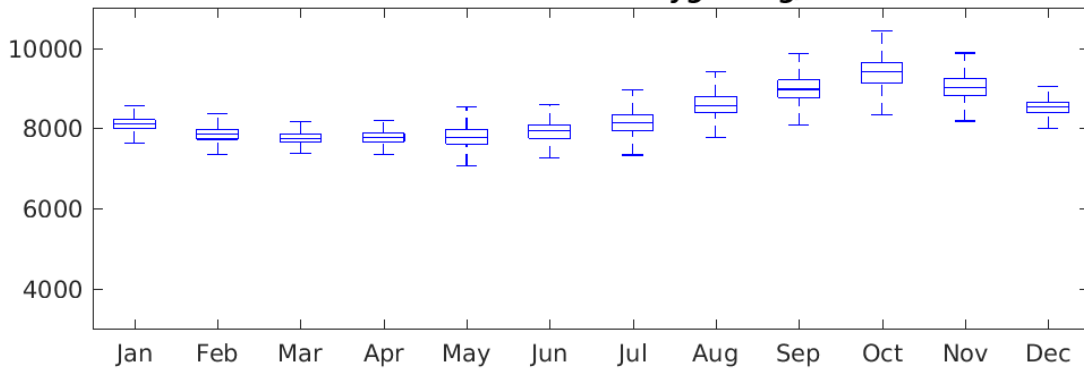
**F-H Bay Surface Oxygen mg/m3**



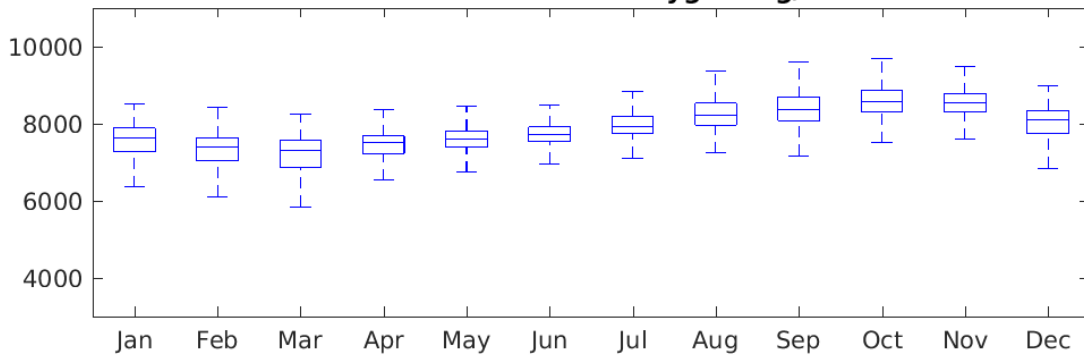
**F-H Bay Bottom Oxygen mg/m3**



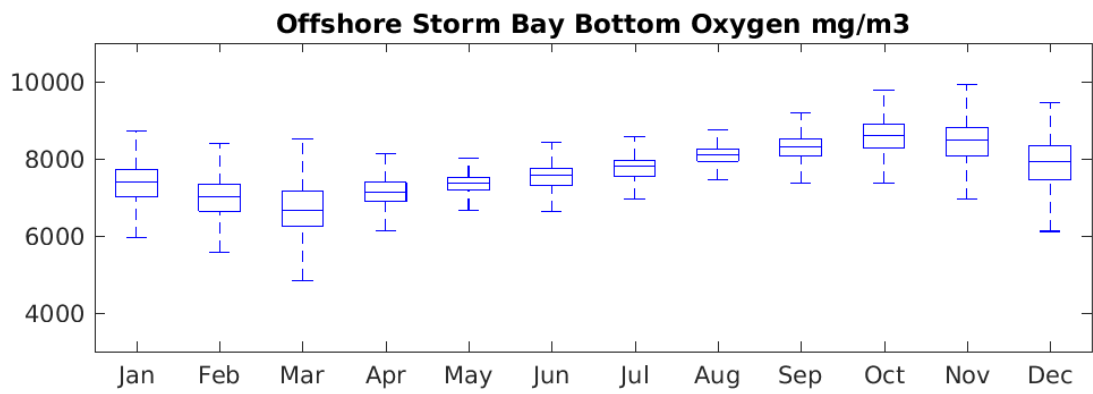
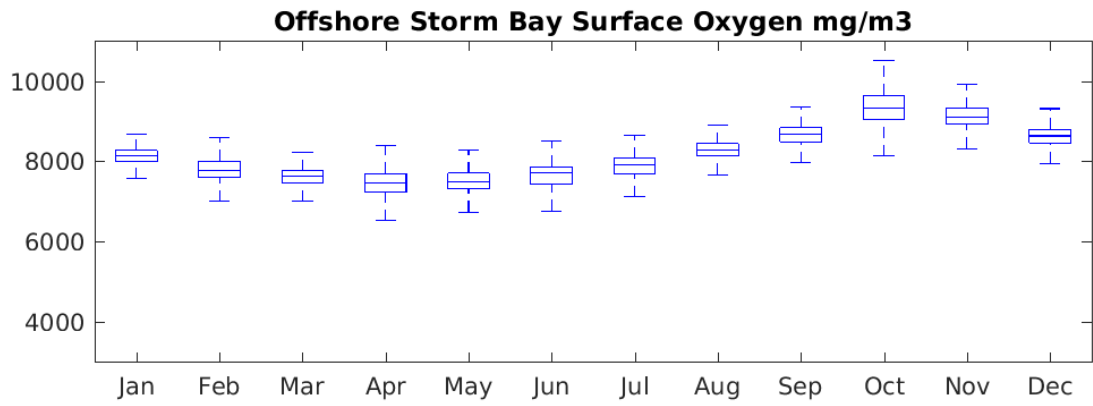
**Port Arthur Surface Oxygen mg/m3**

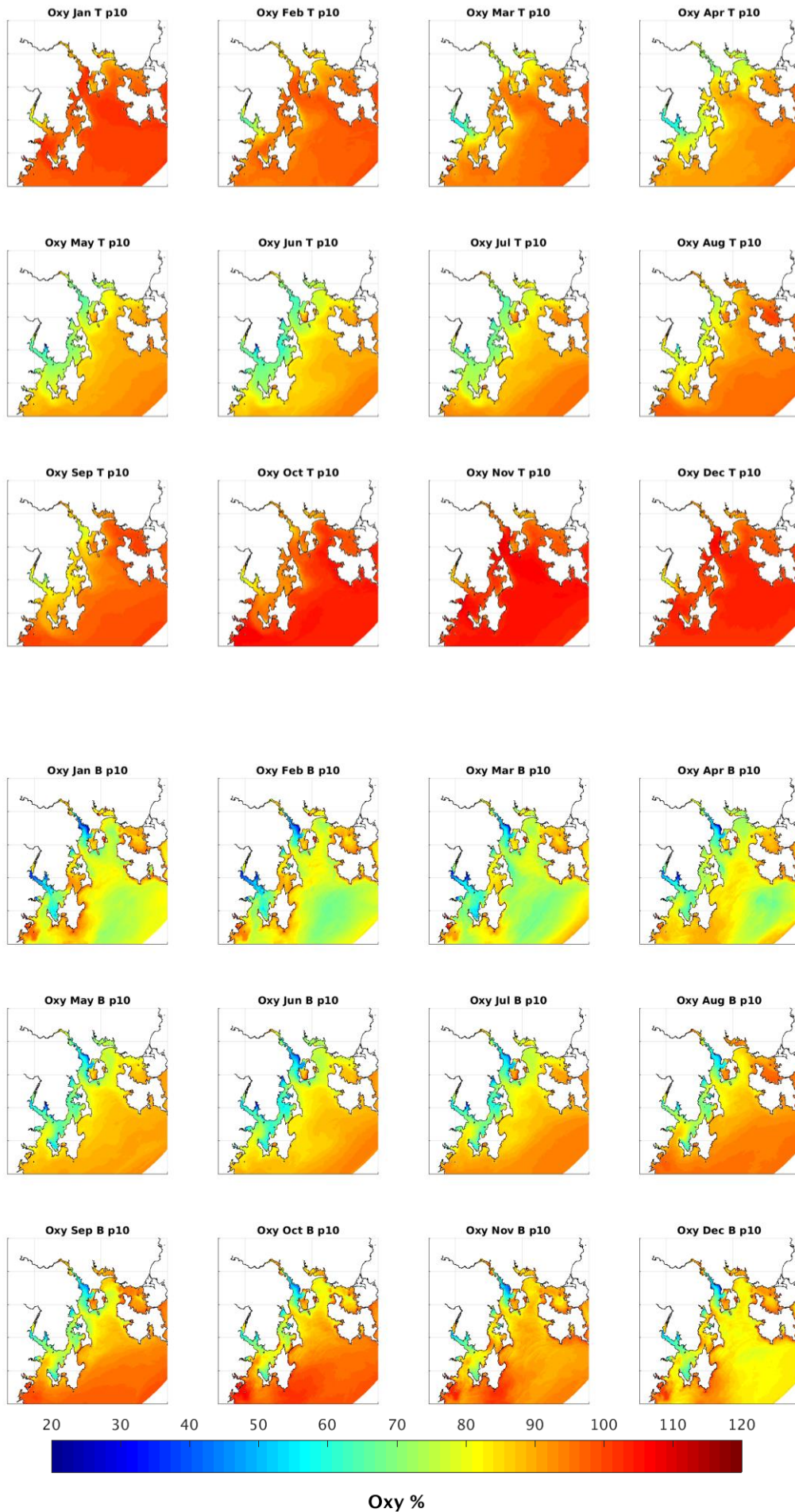


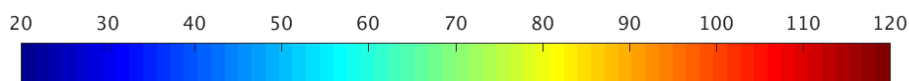
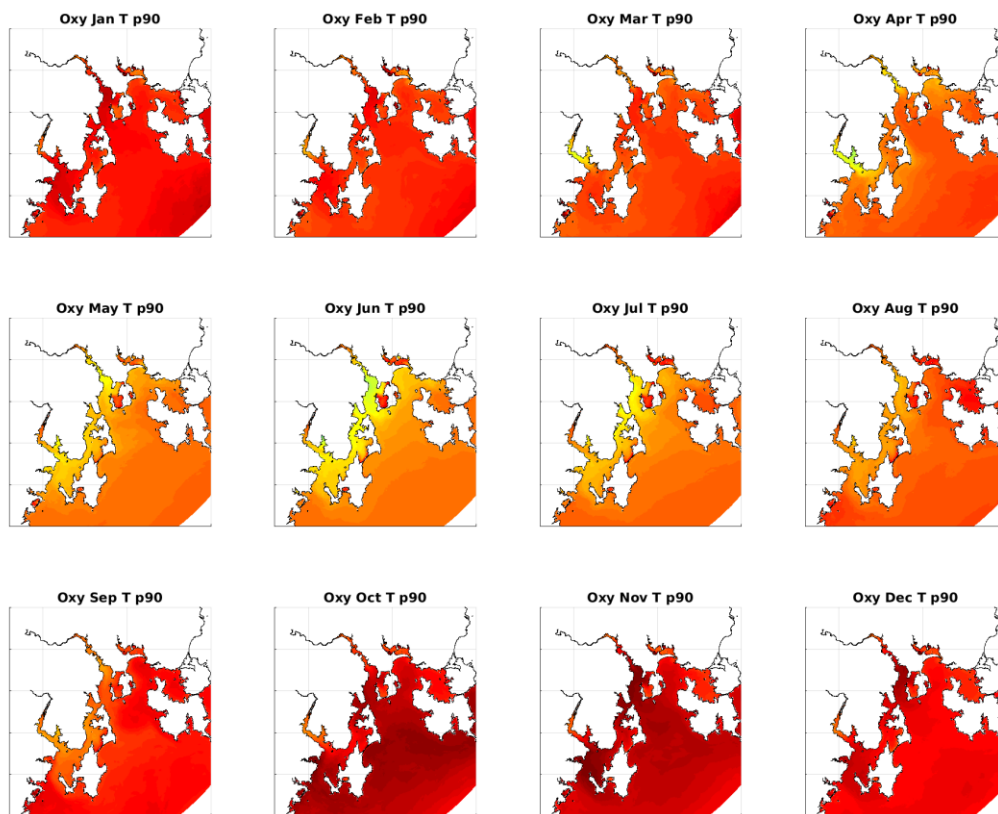
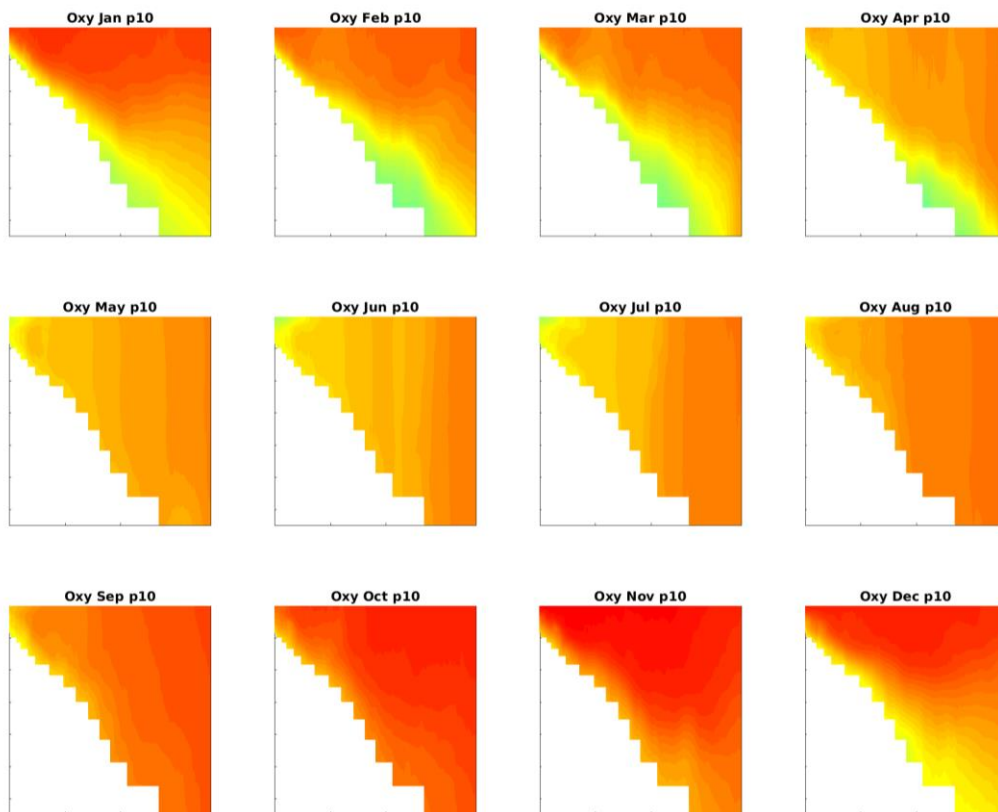
**Port Arthur Bottom Oxygen mg/m3**



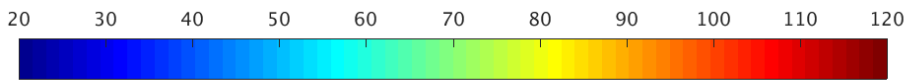
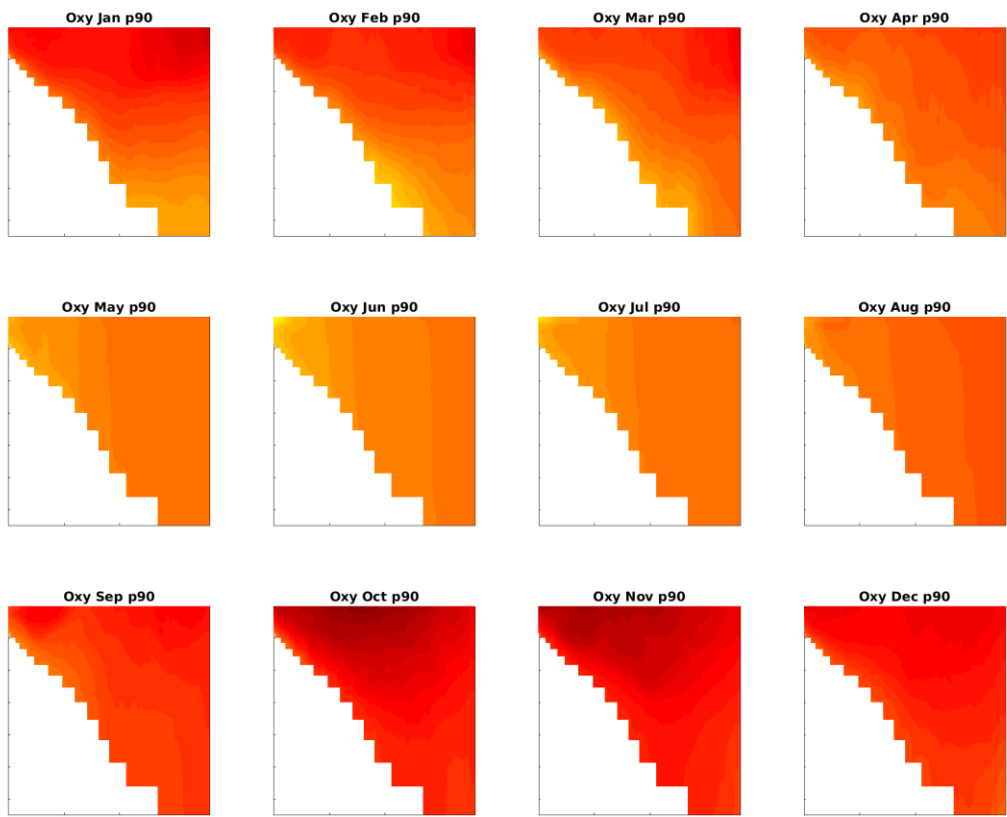
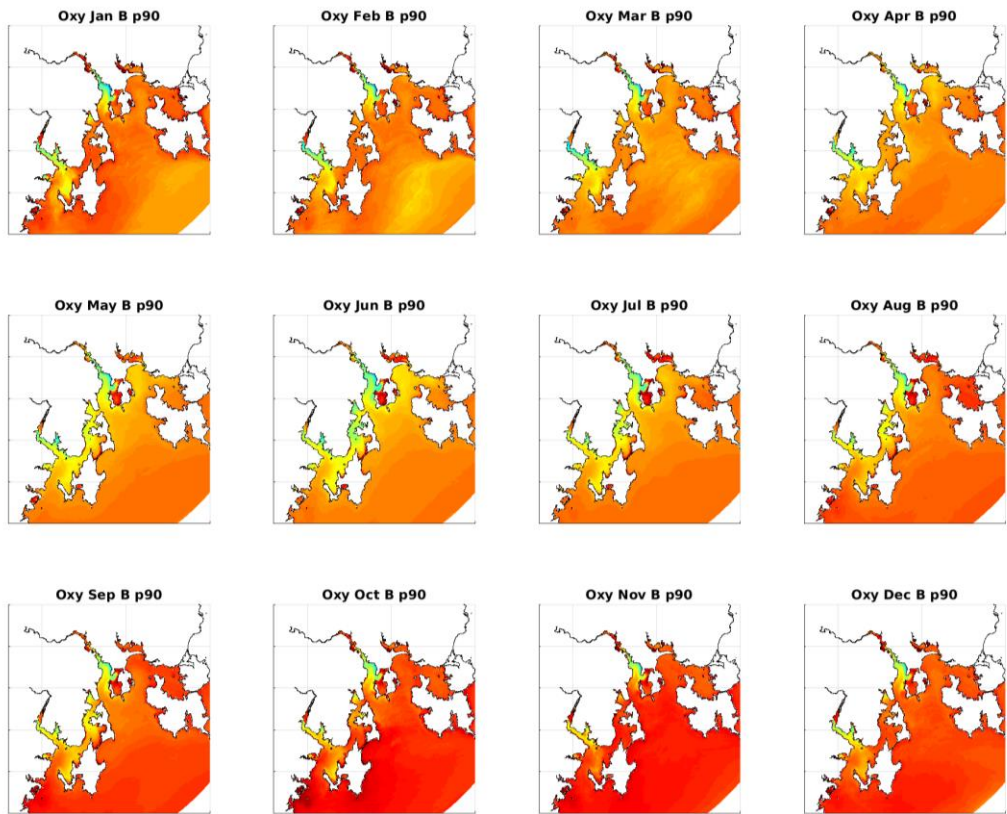




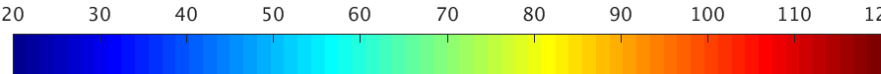
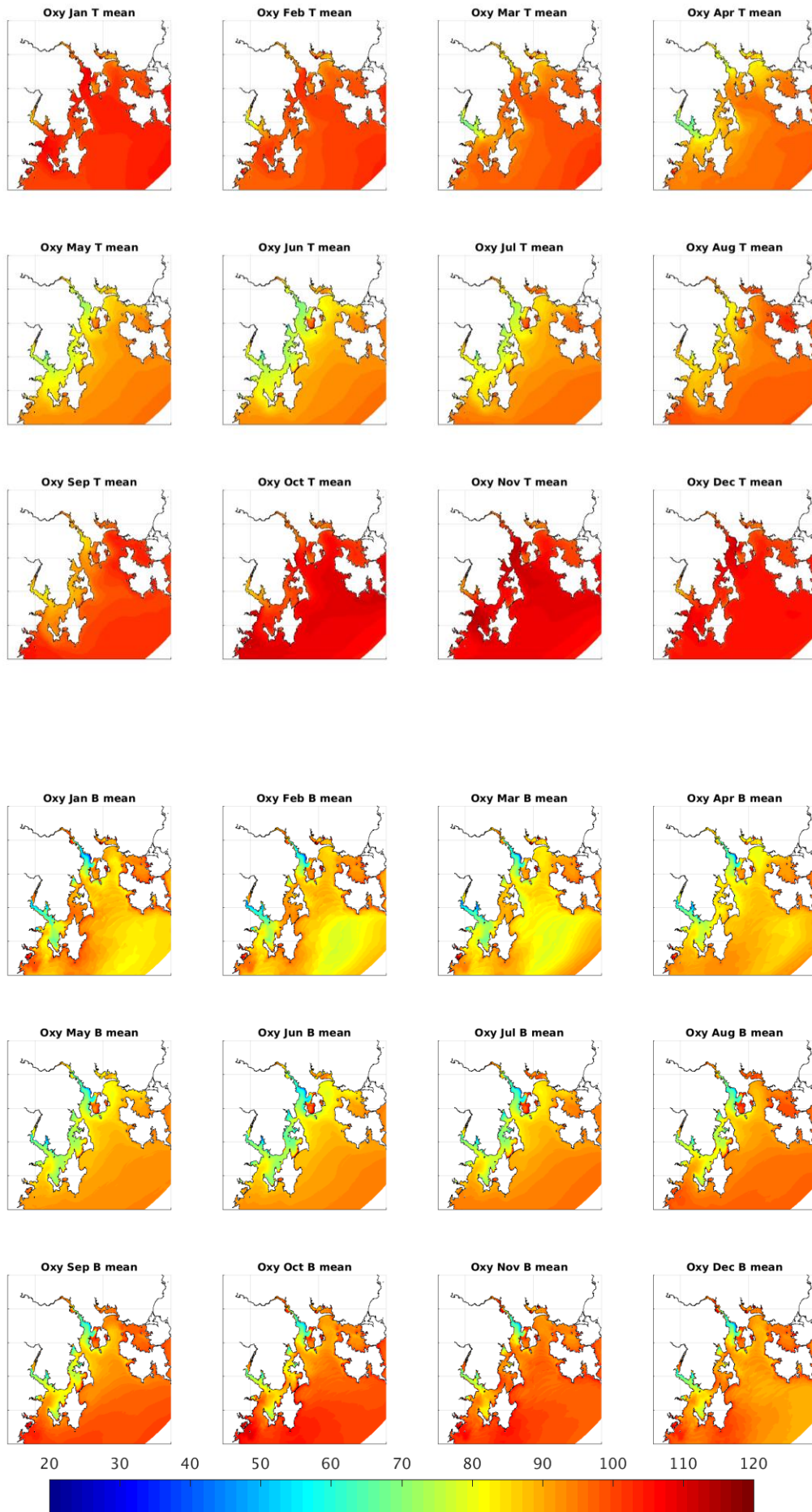




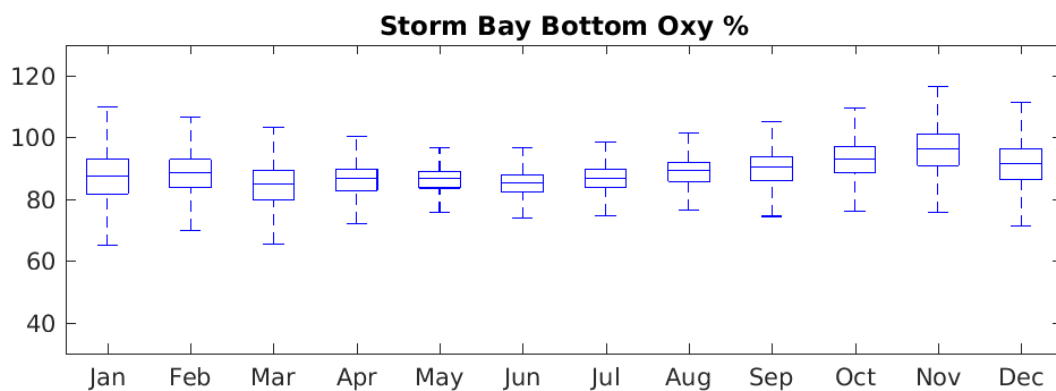
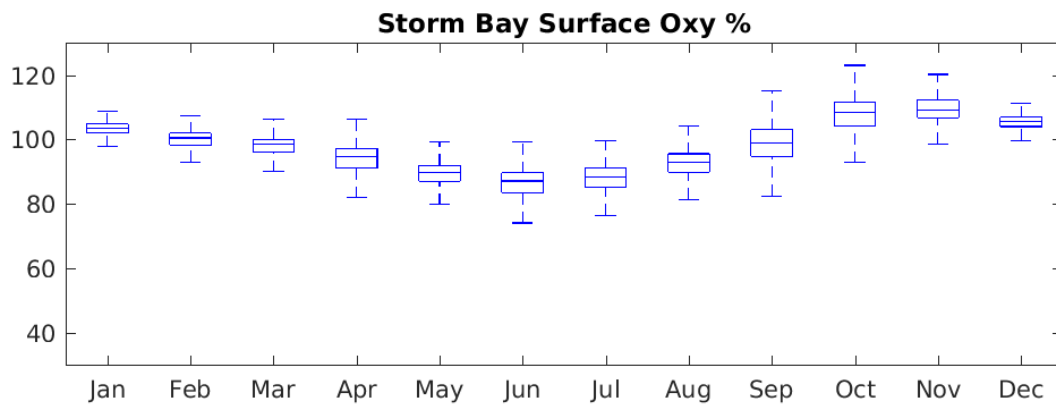
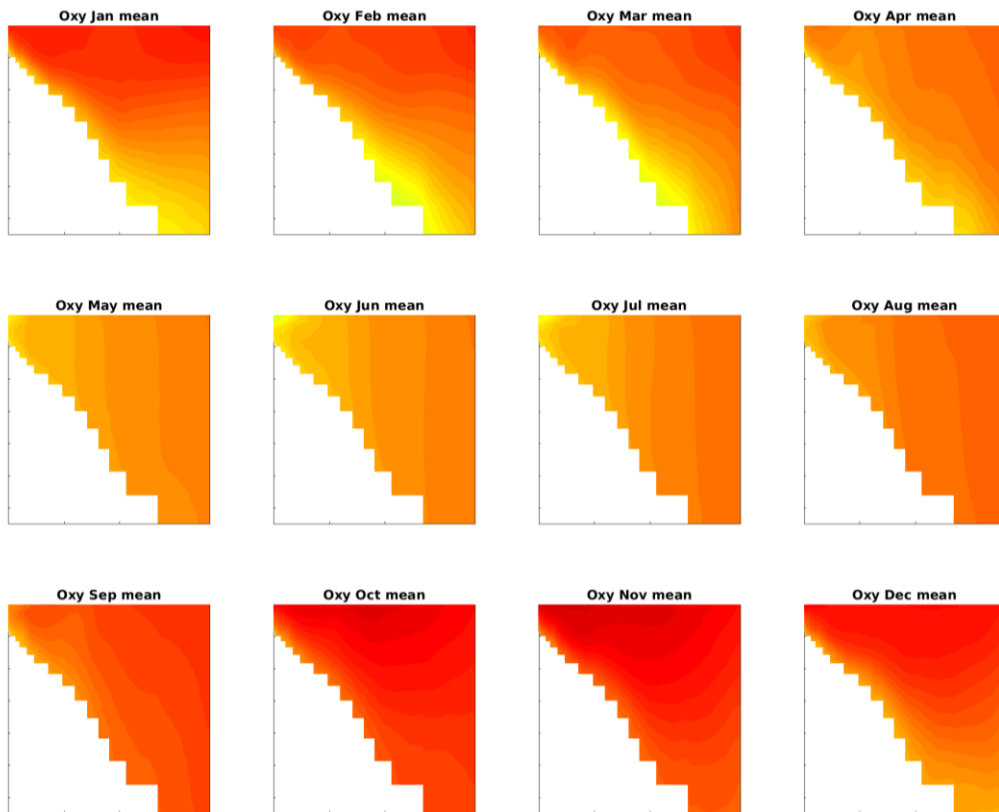
Oxy %

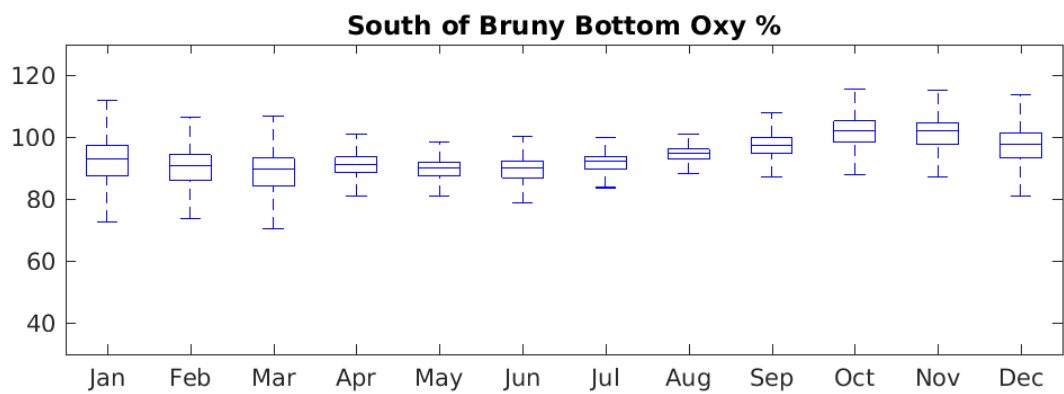
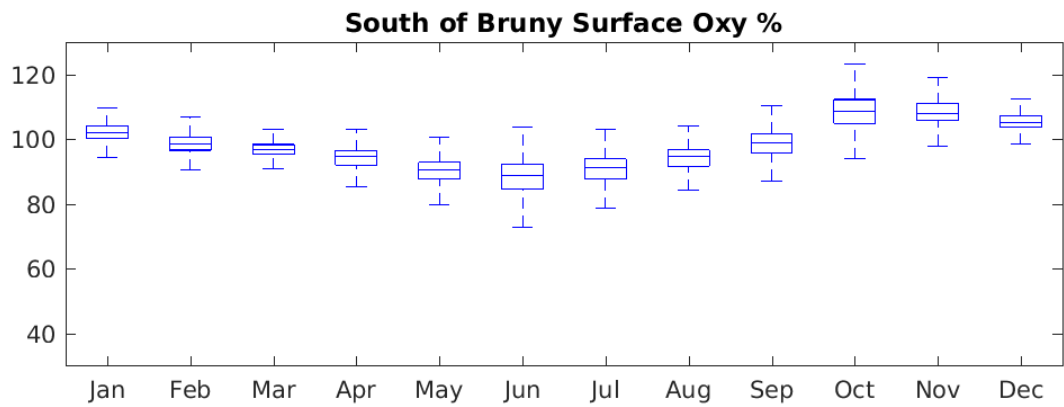
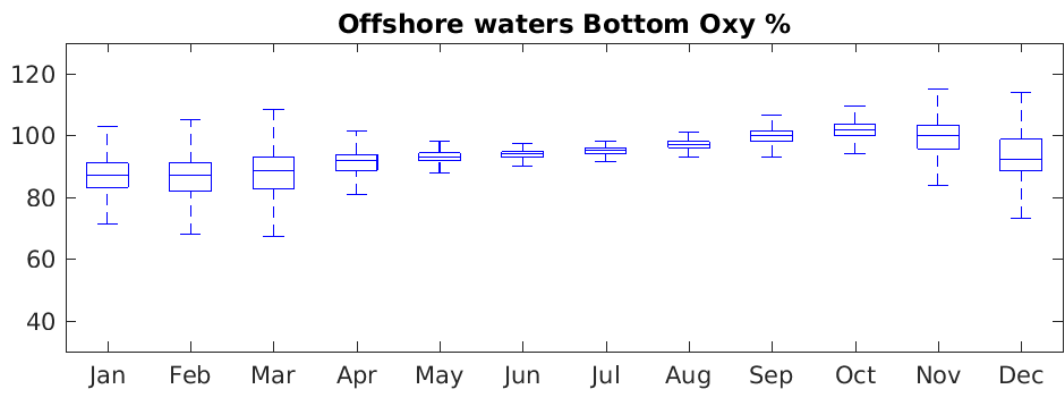
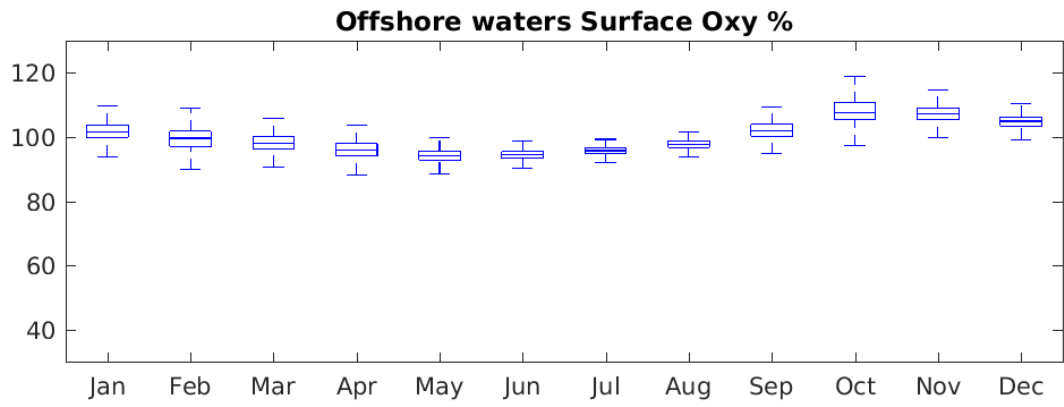


Oxy %

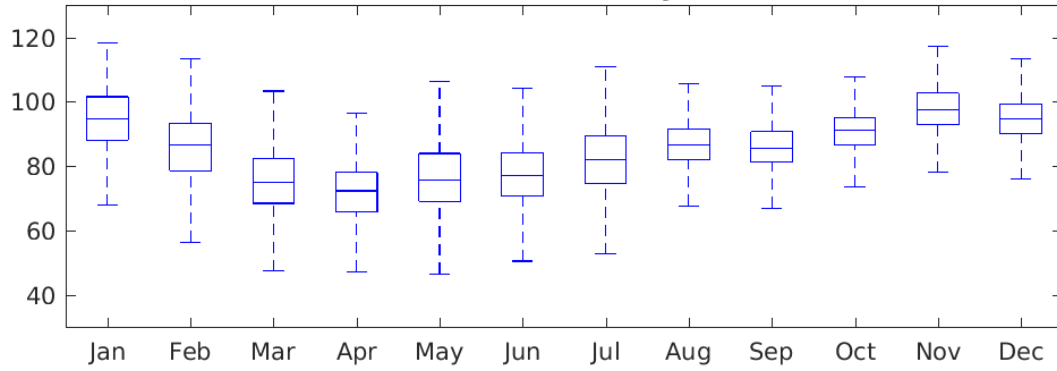


Oxy %

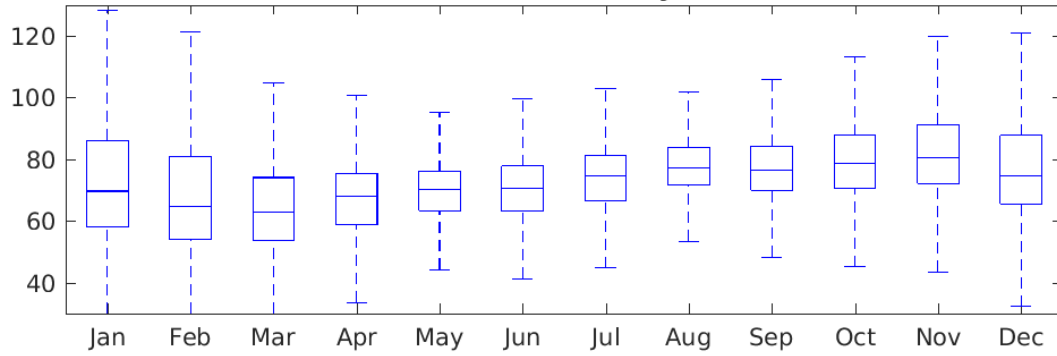




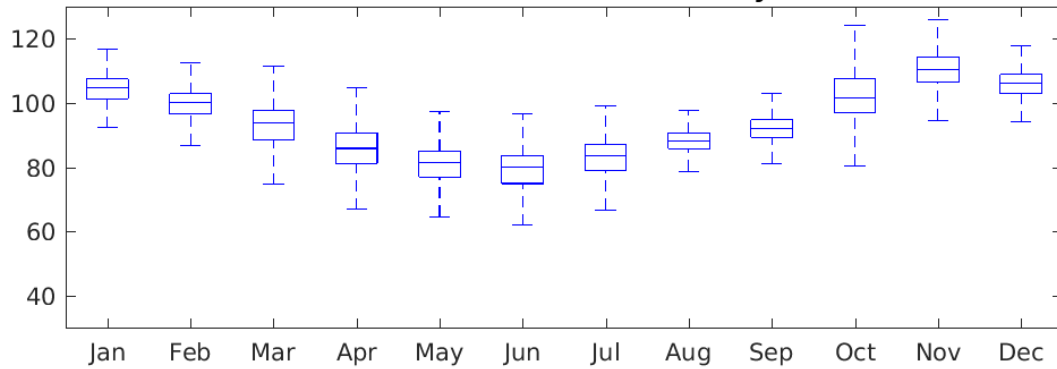
**Huon Surface Oxy %**



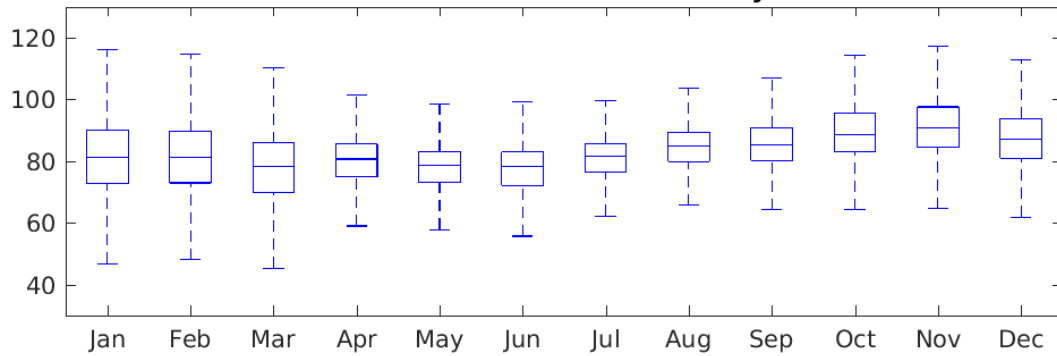
**Huon Bottom Oxy %**



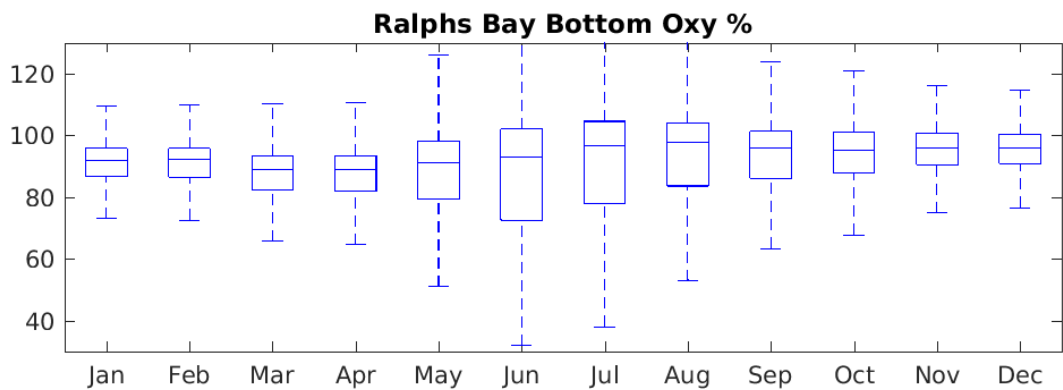
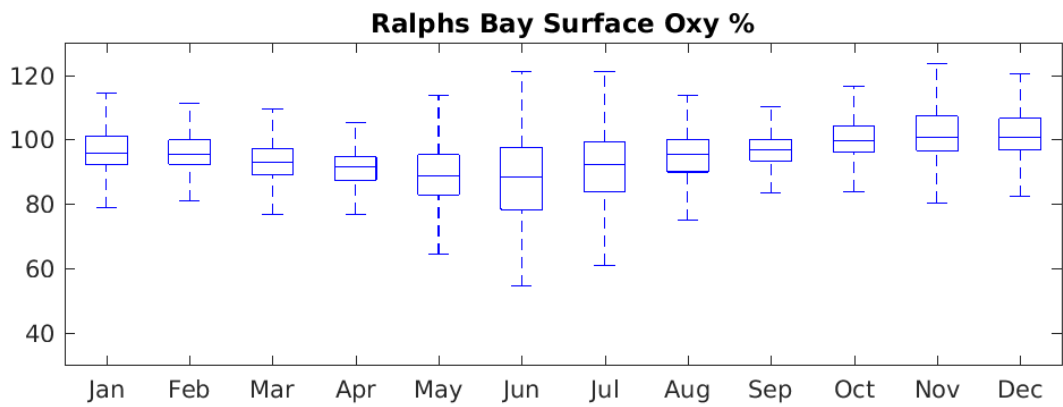
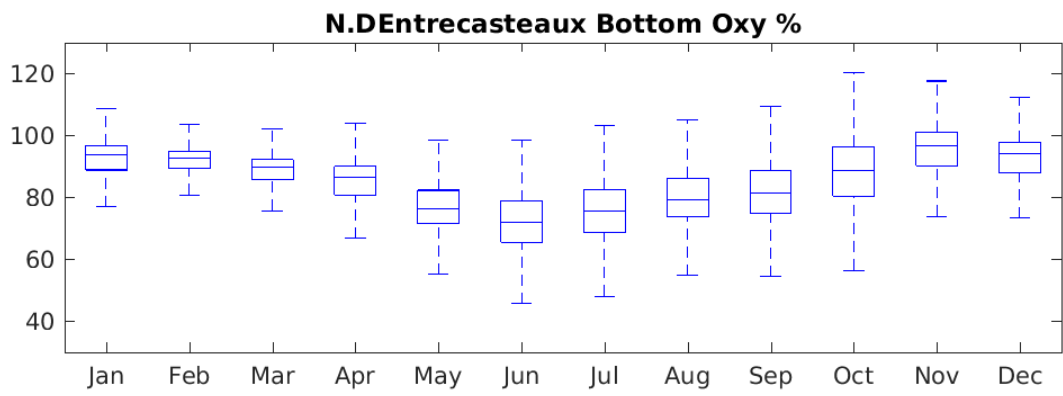
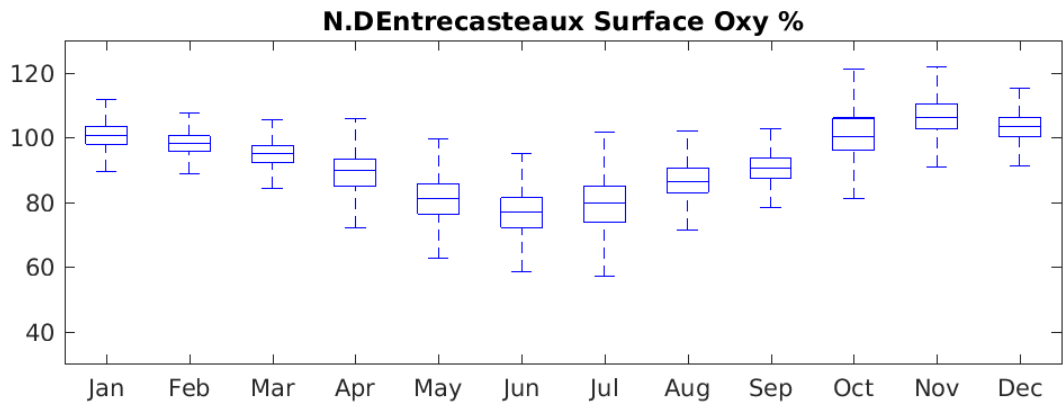
**S.D'Entrecasteaux Surface Oxy %**

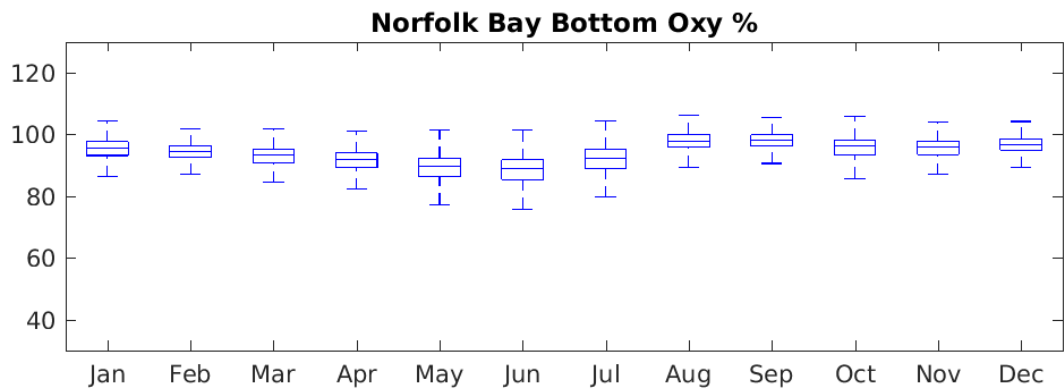
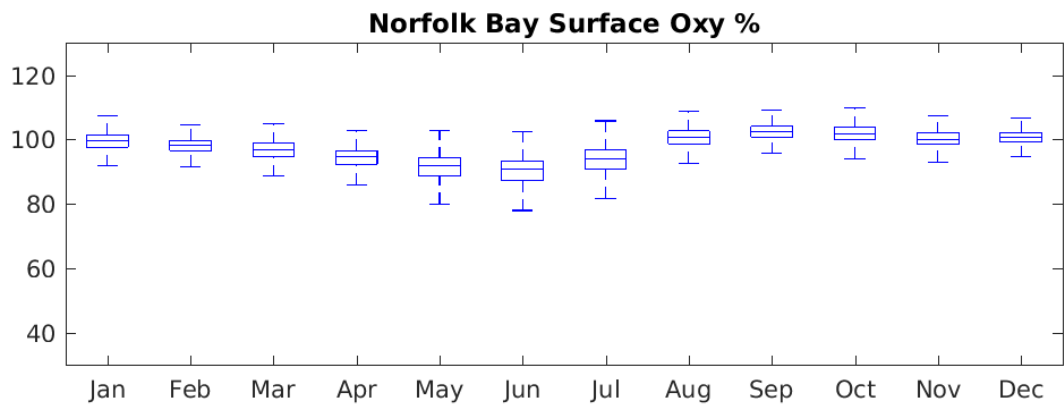
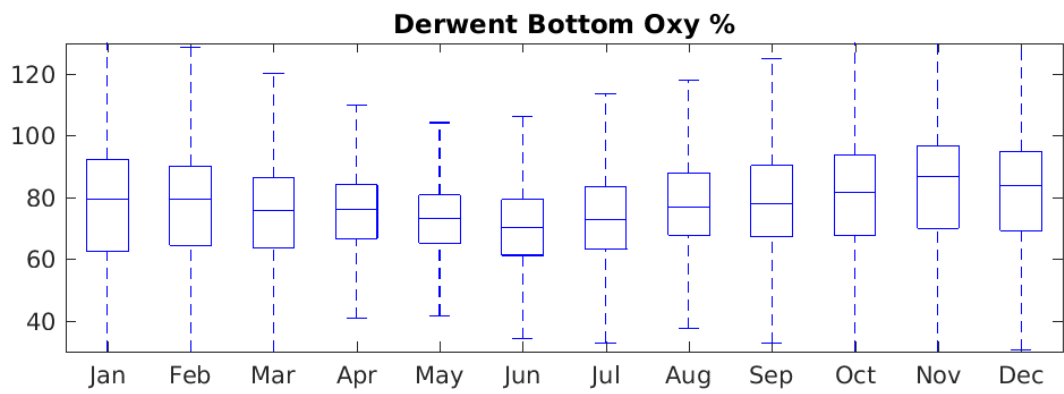
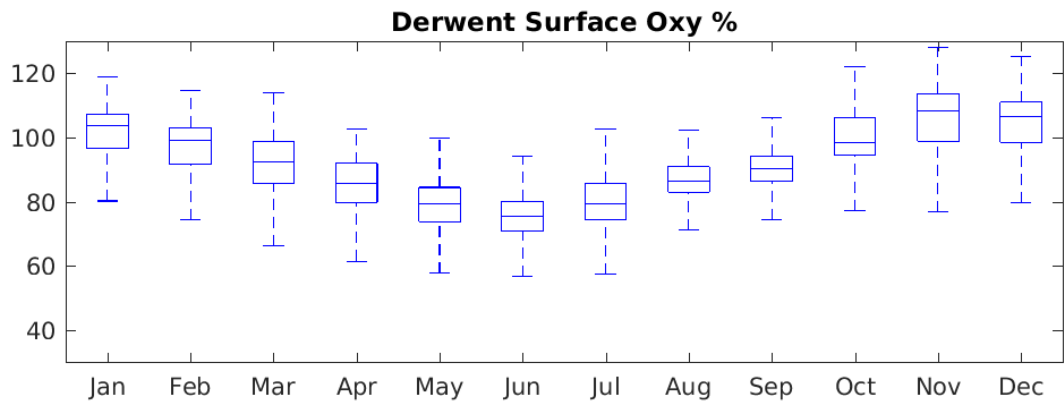


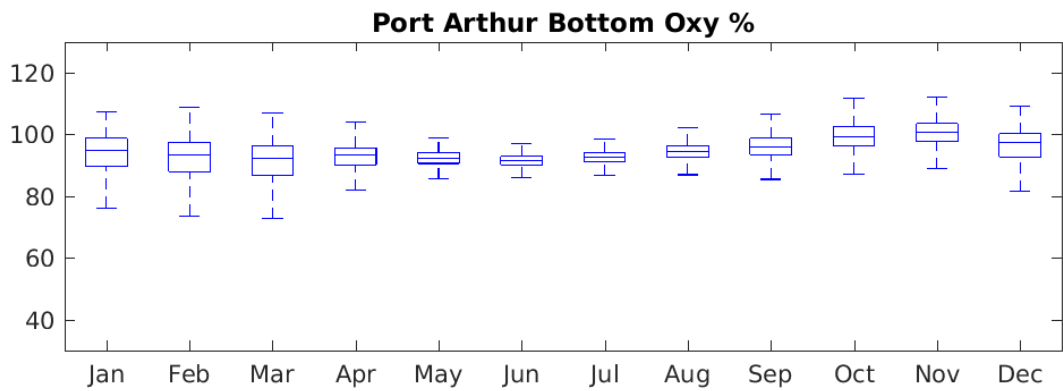
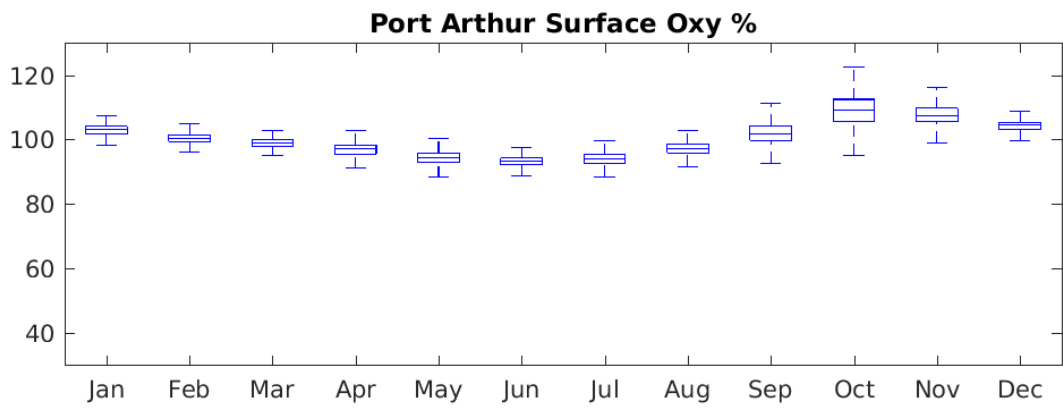
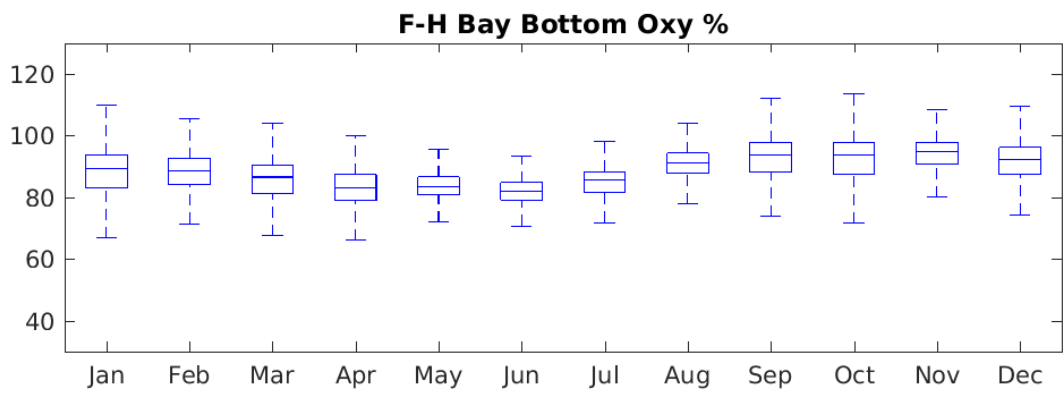
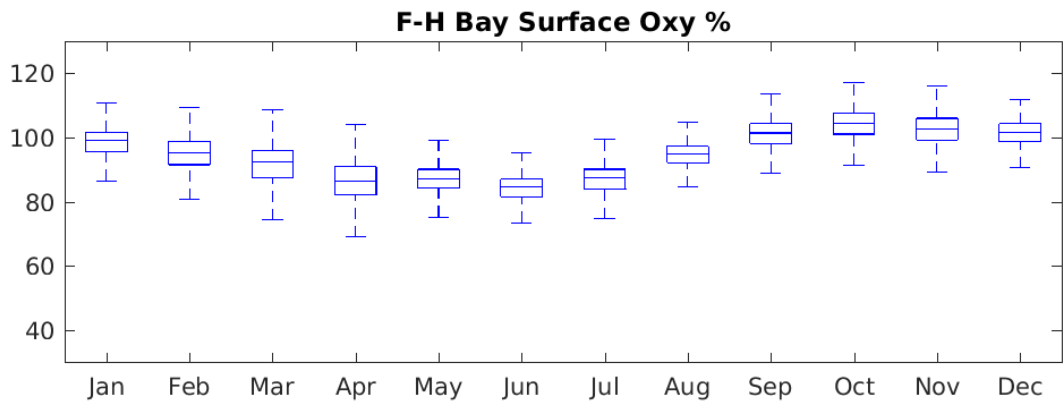
**S.D'Entrecasteaux Bottom Oxy %**



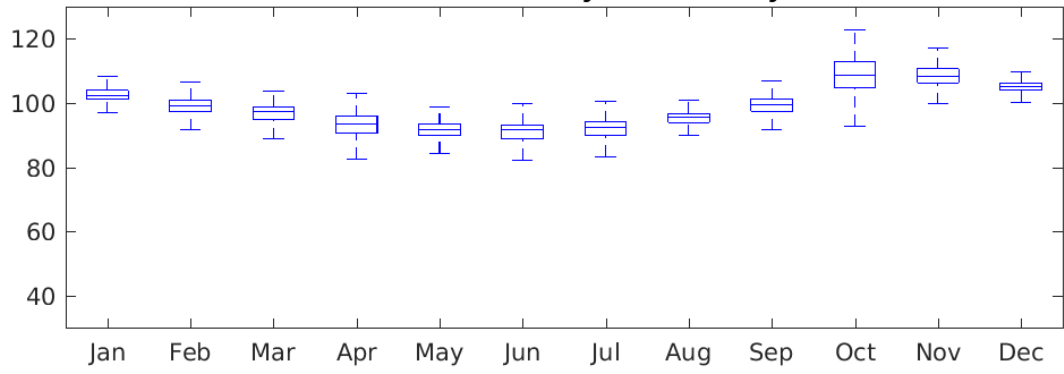




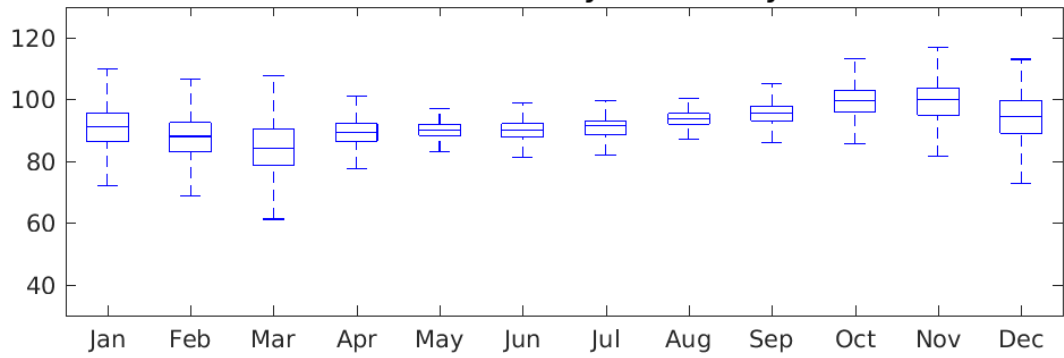


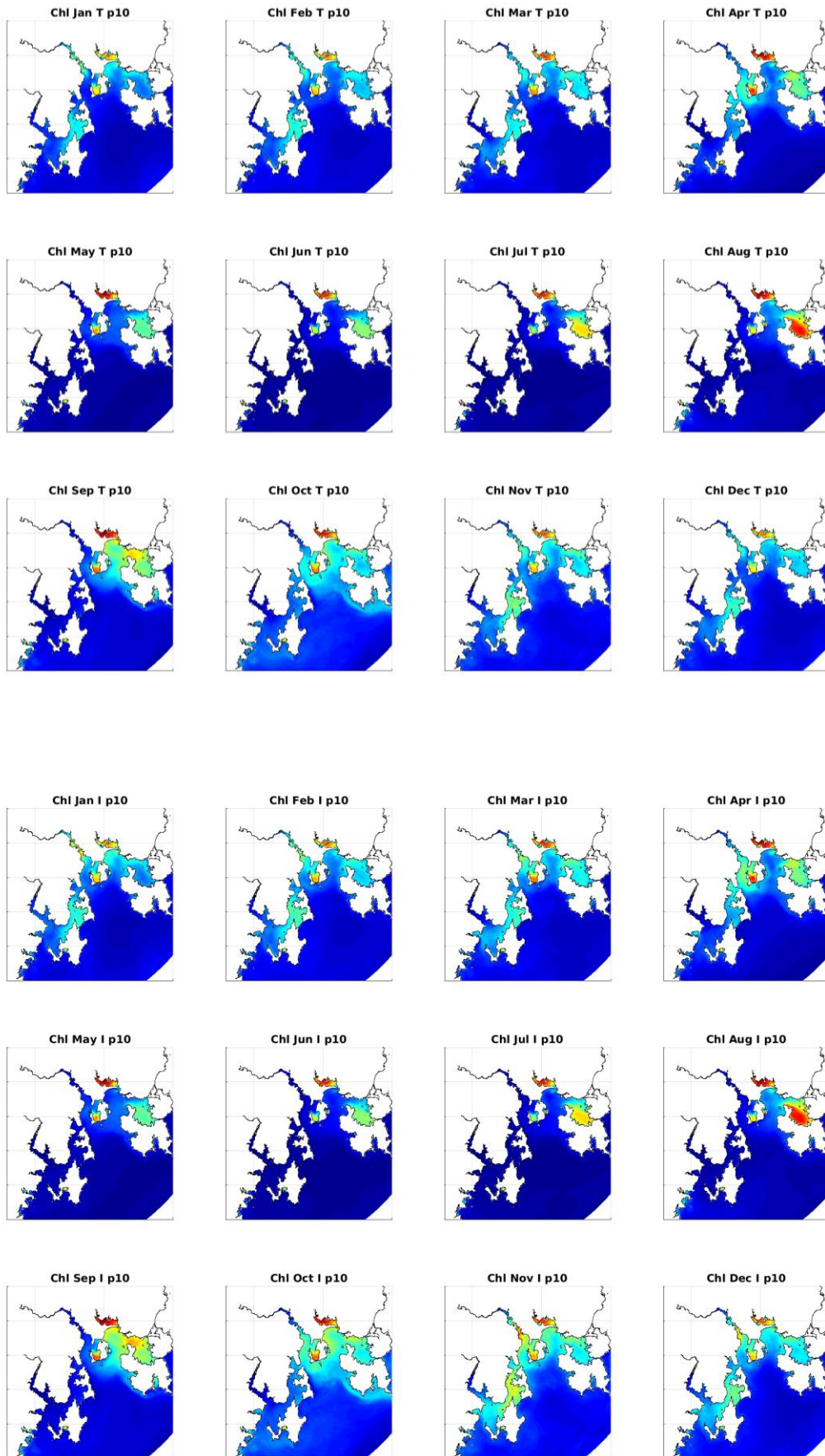


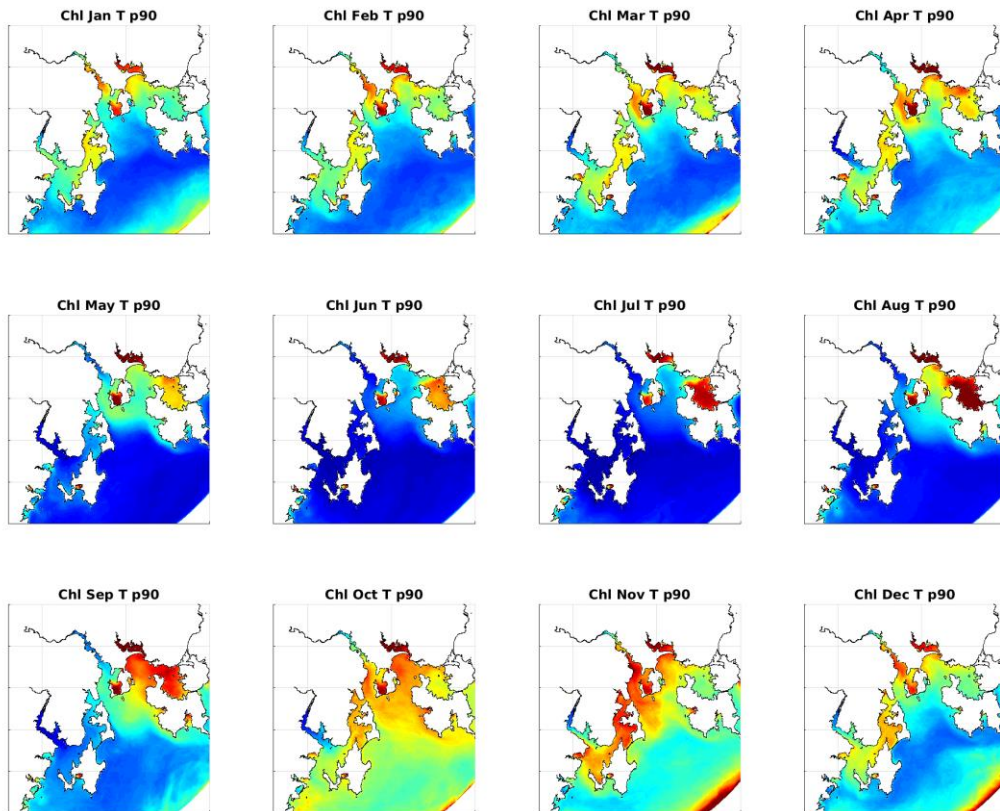
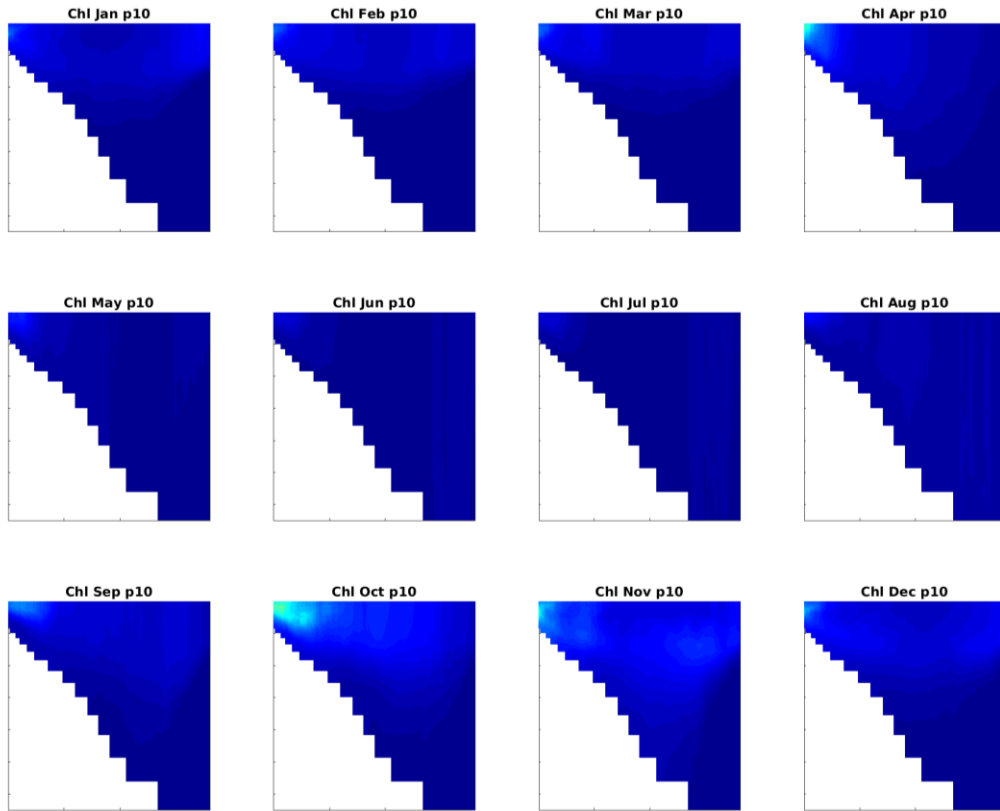
**Offshore Storm Bay Surface Oxy %**

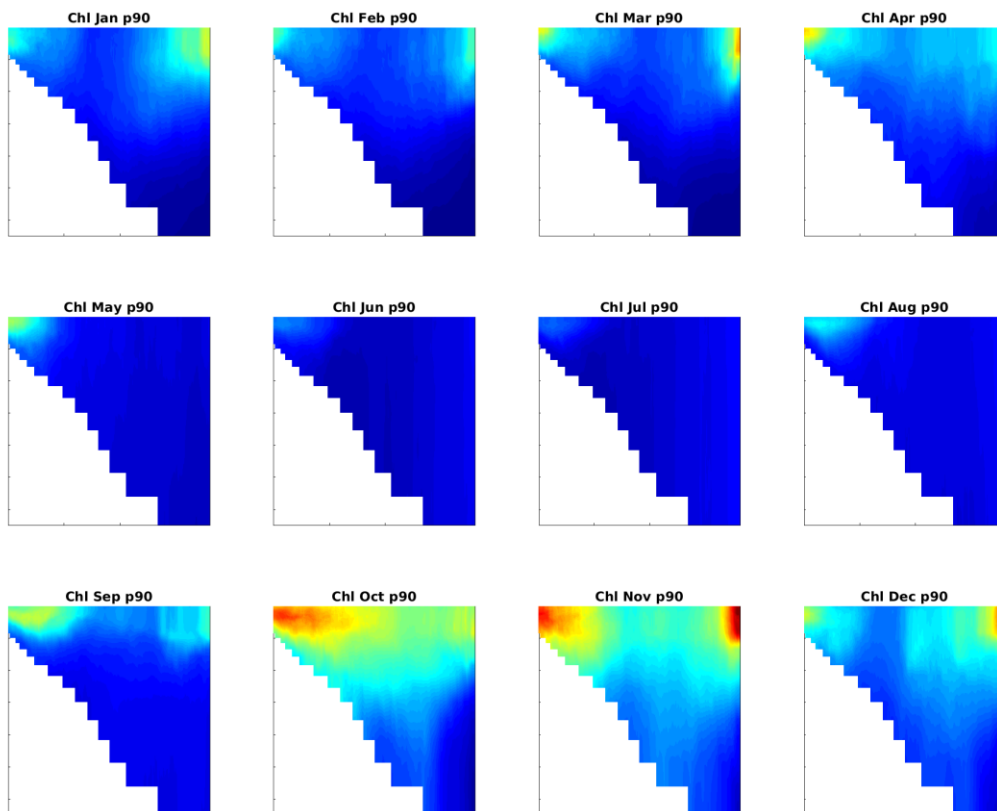
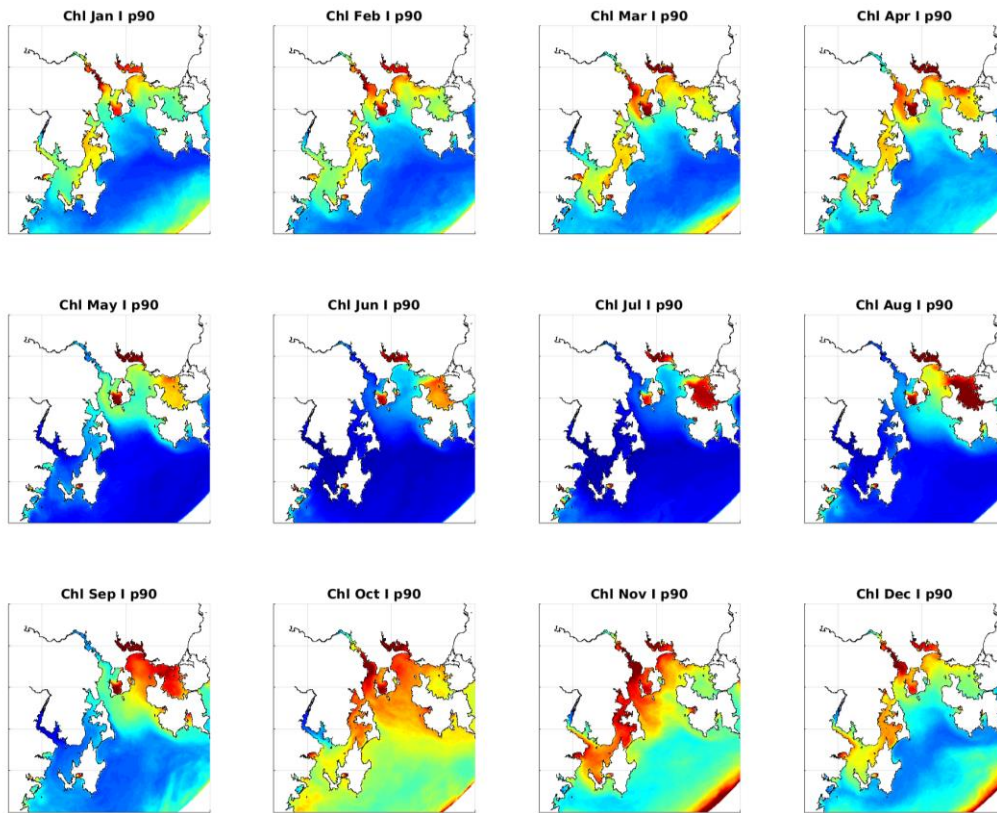


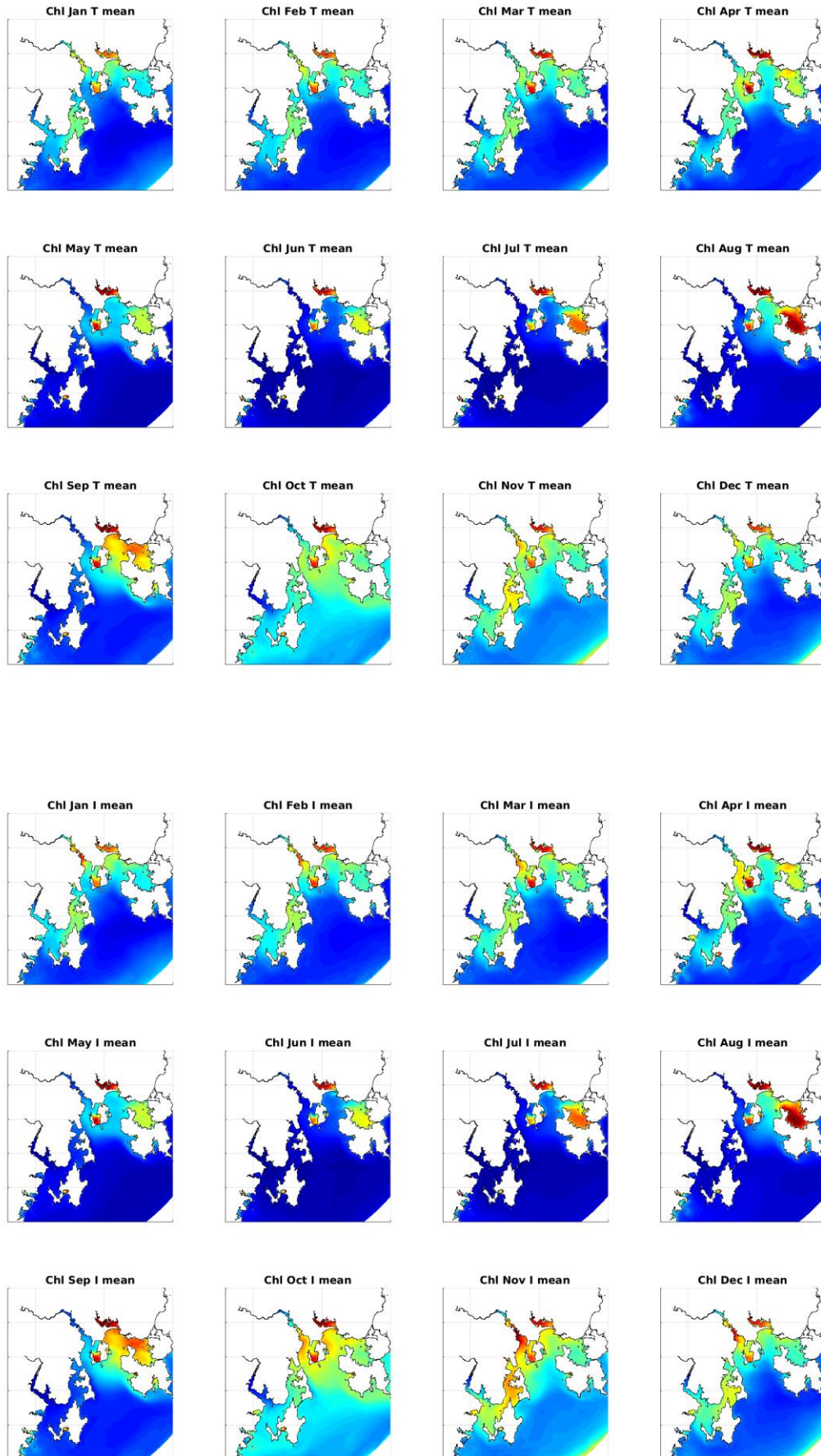
**Offshore Storm Bay Bottom Oxy %**



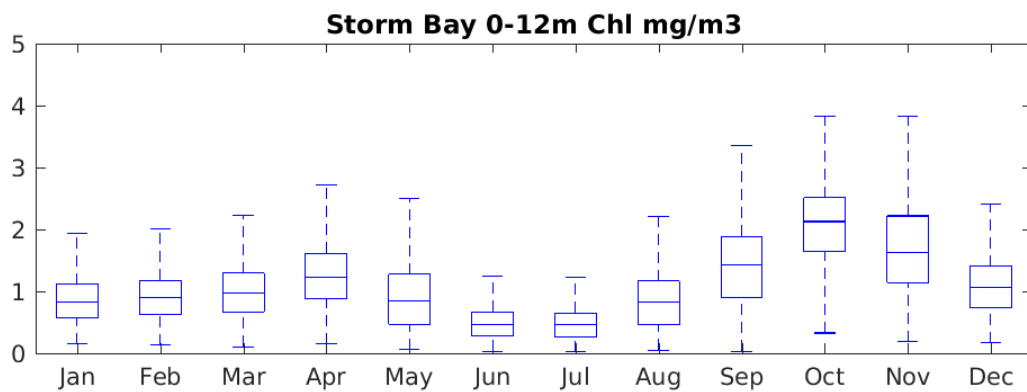
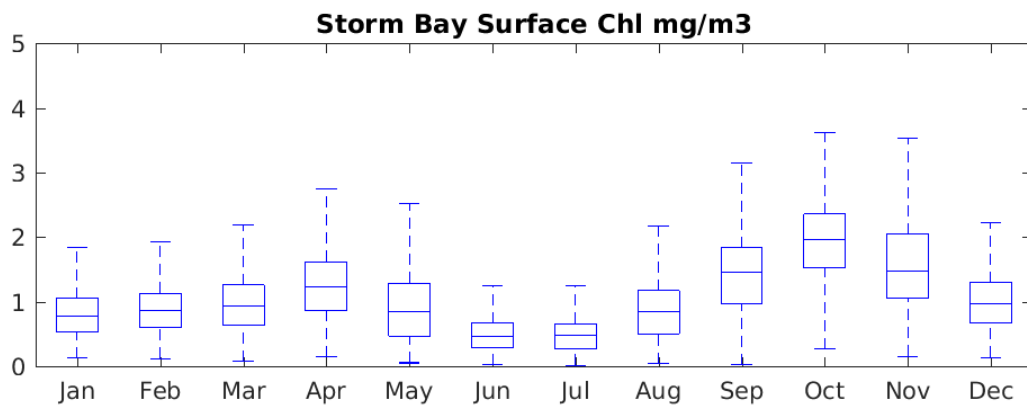
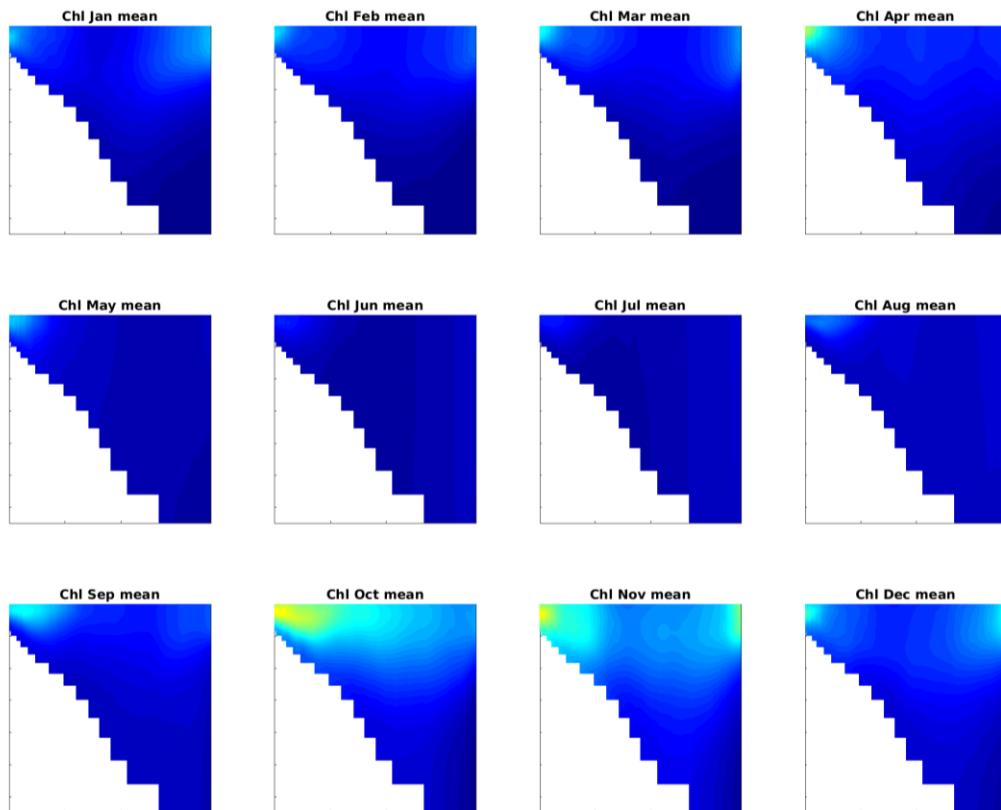




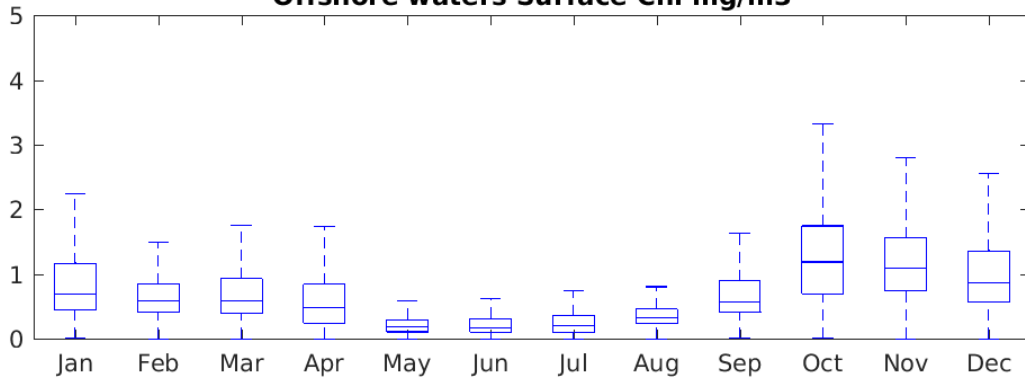




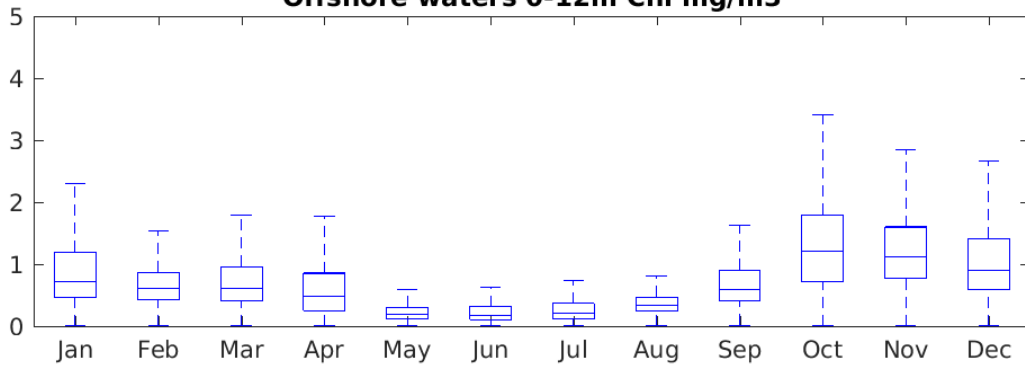




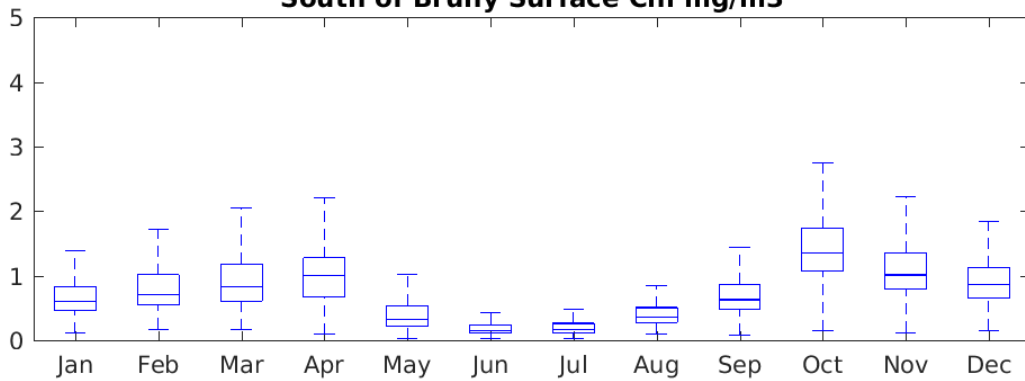
**Offshore waters Surface Chl mg/m3**



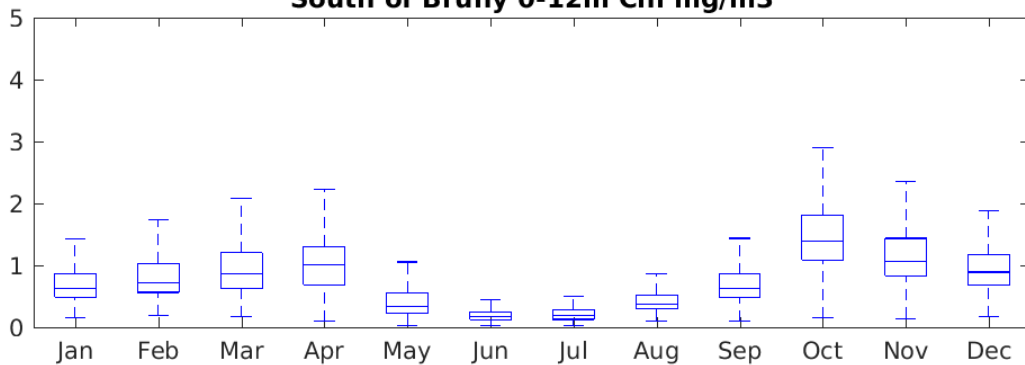
**Offshore waters 0-12m Chl mg/m3**

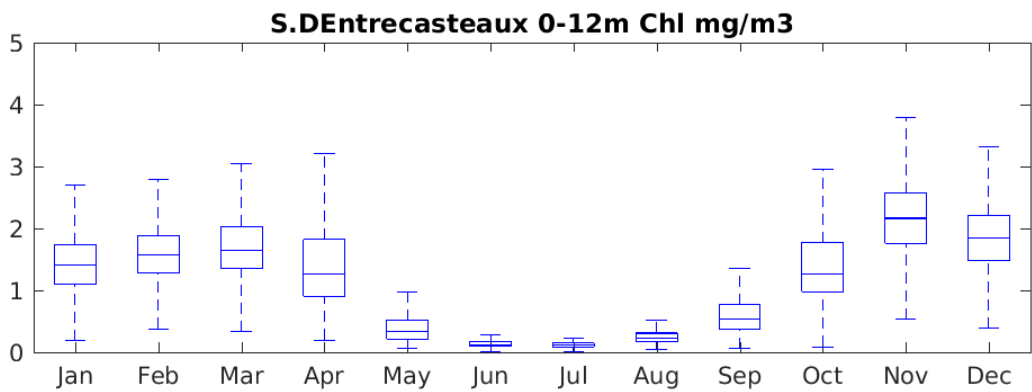
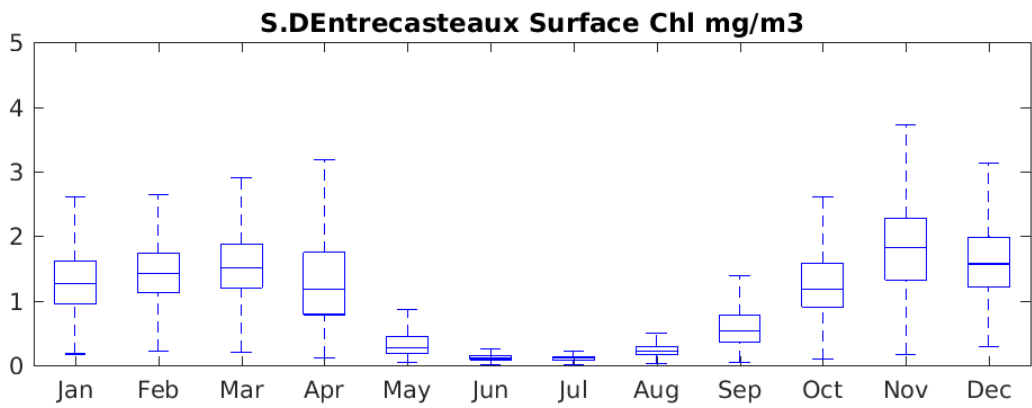
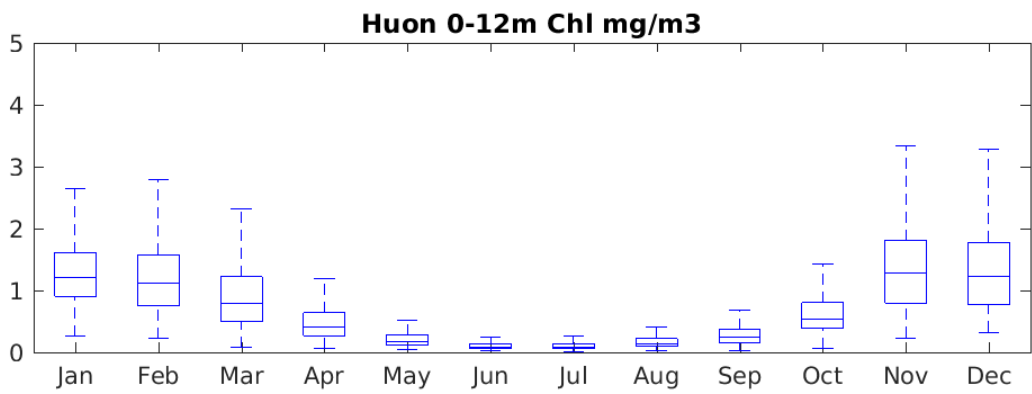
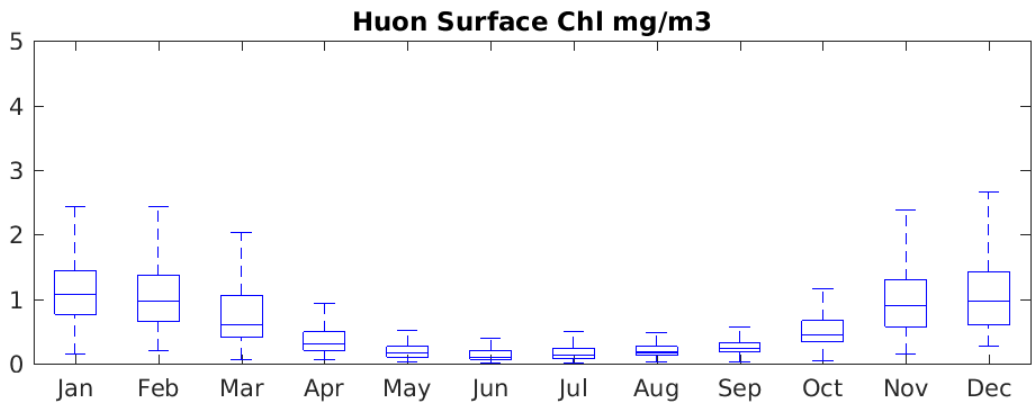


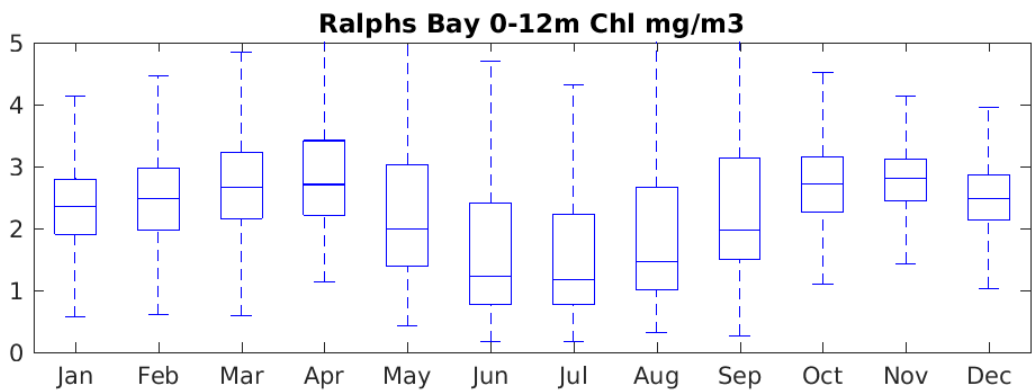
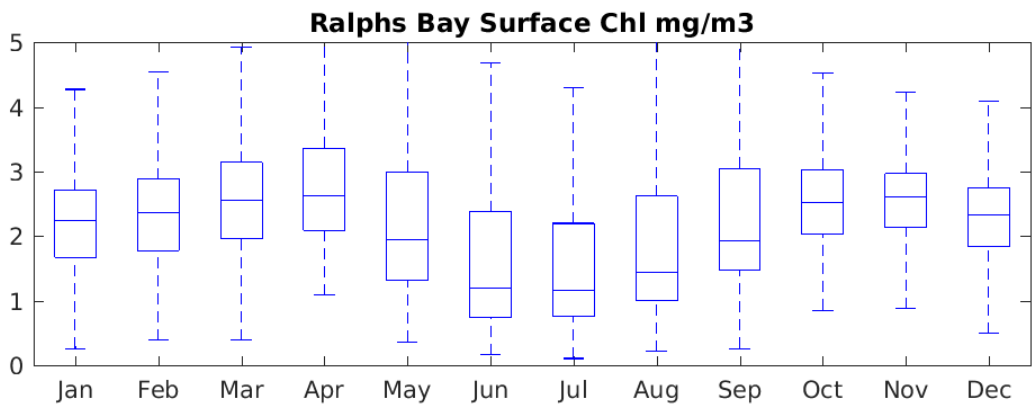
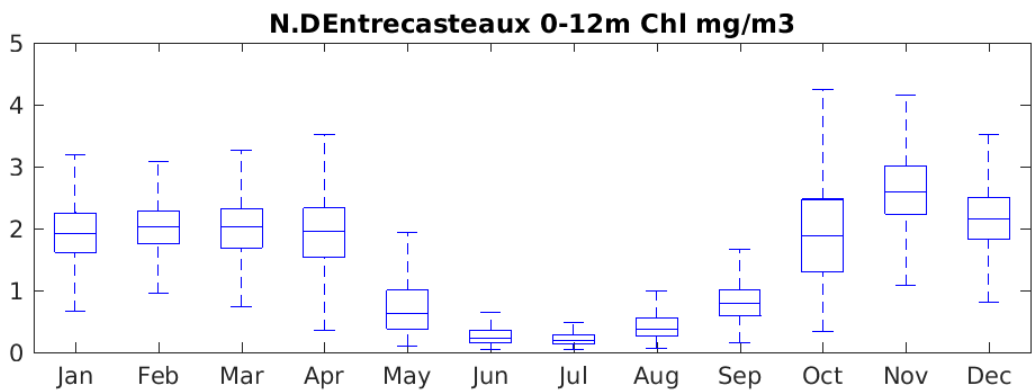
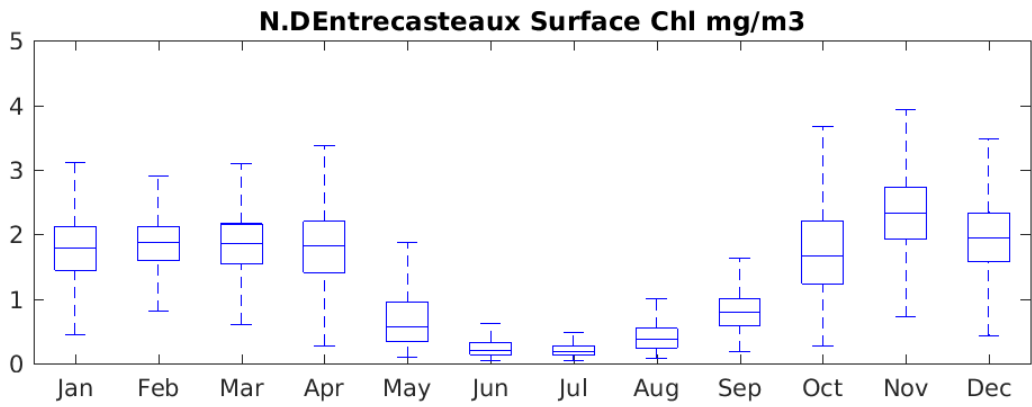
**South of Bruny Surface Chl mg/m3**

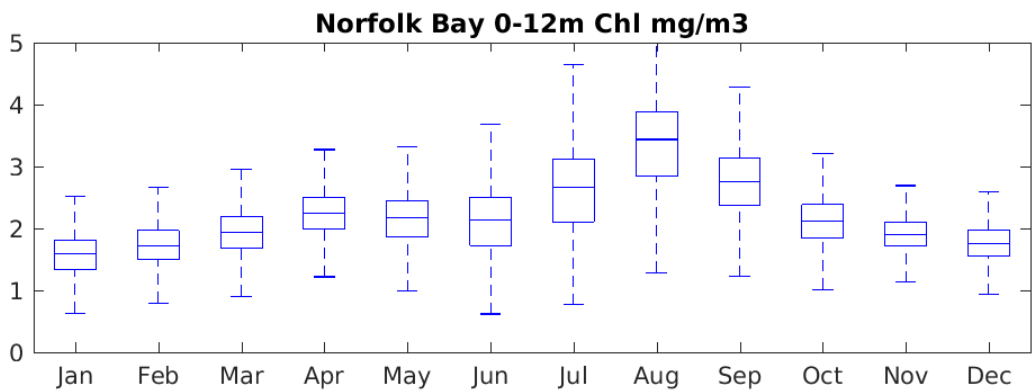
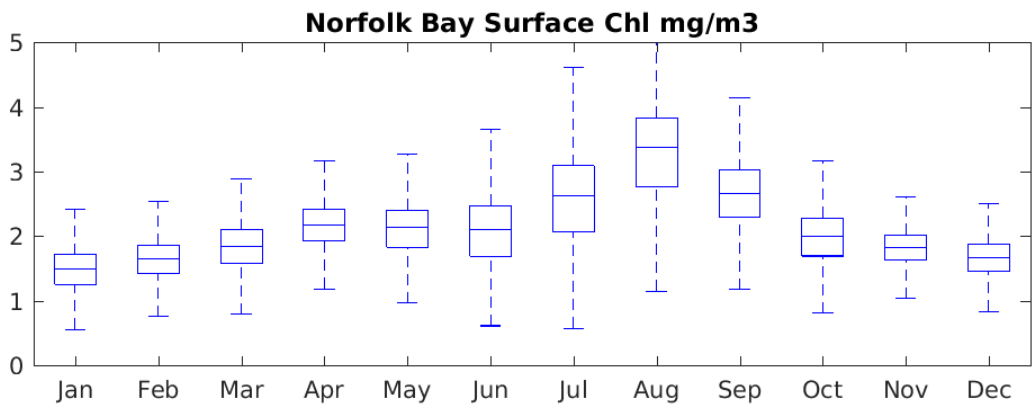
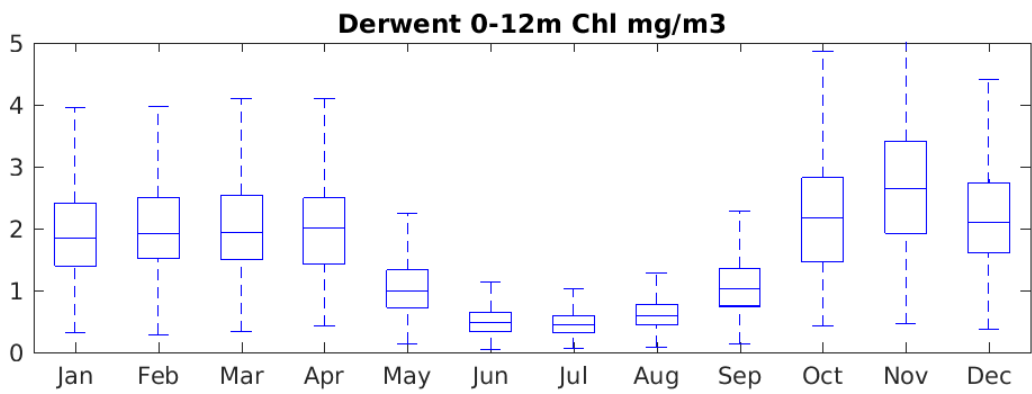
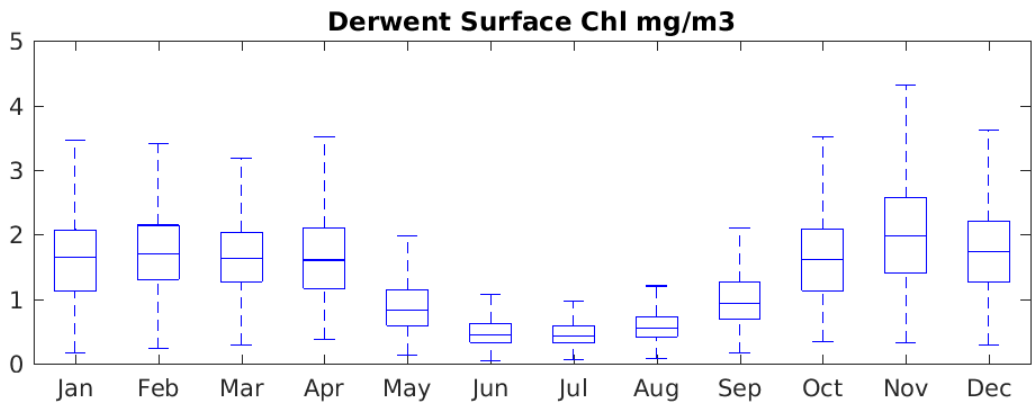


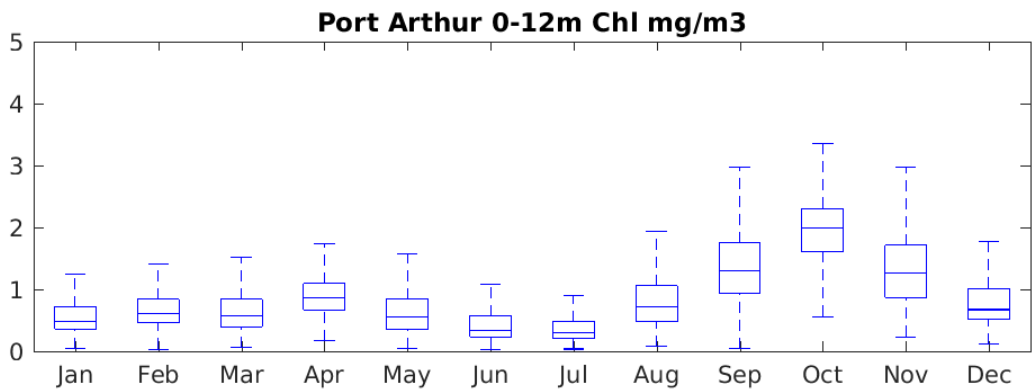
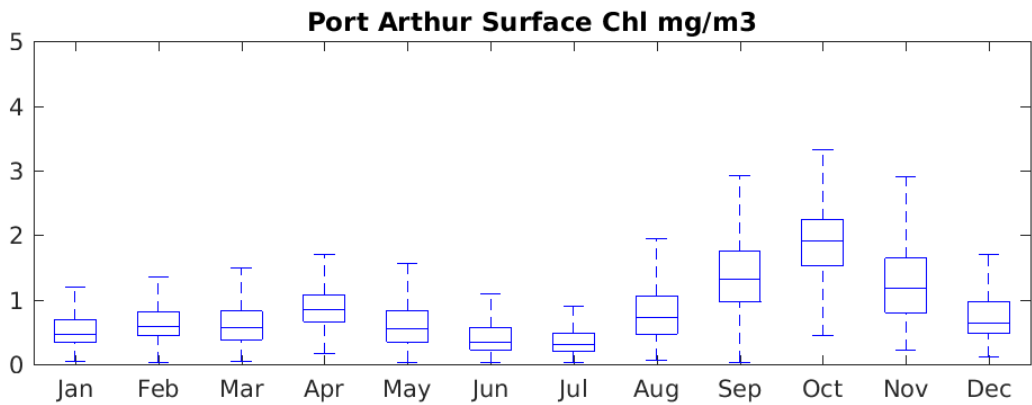
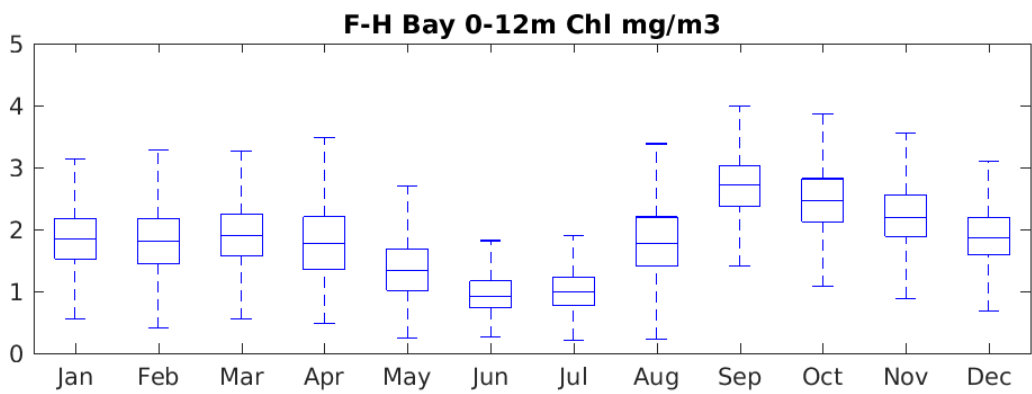
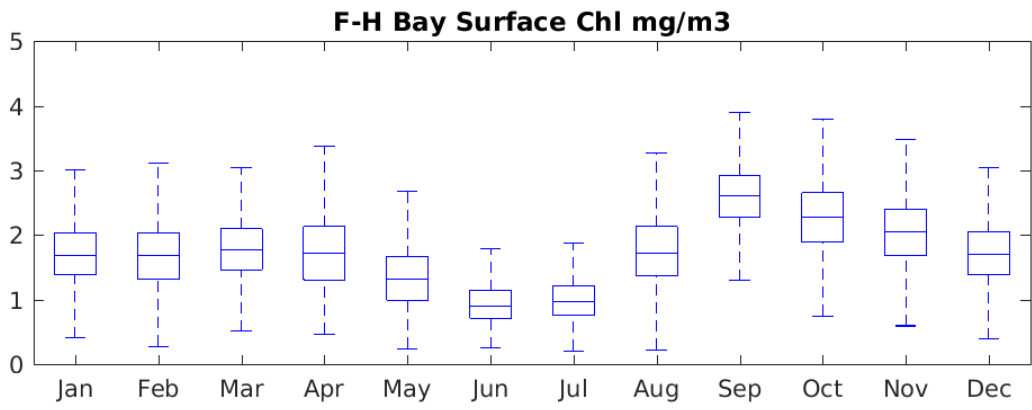
**South of Bruny 0-12m Chl mg/m3**

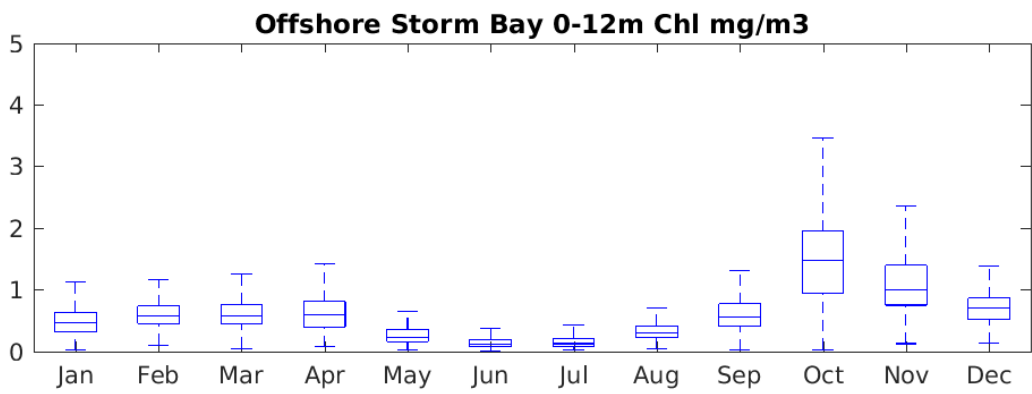
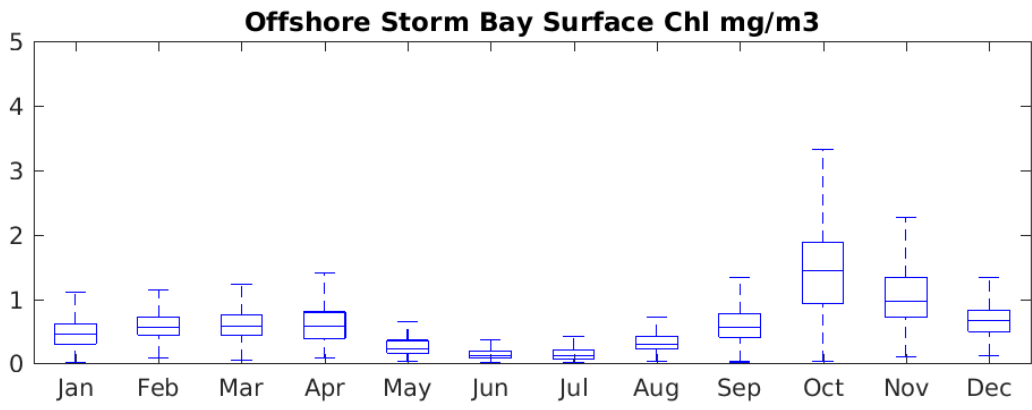


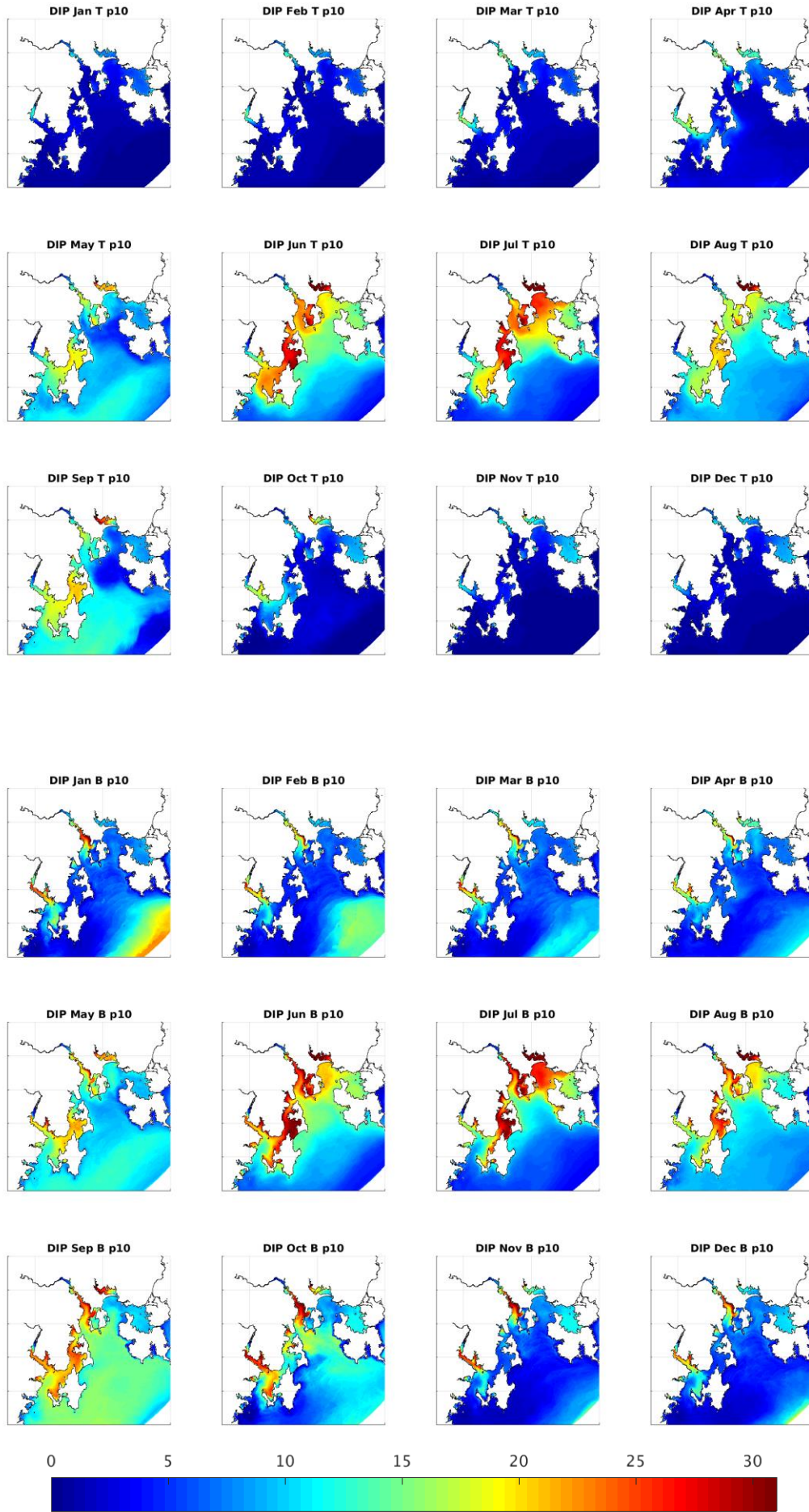






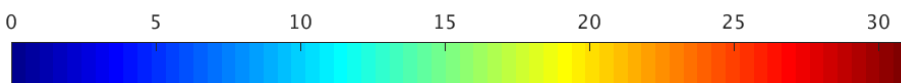
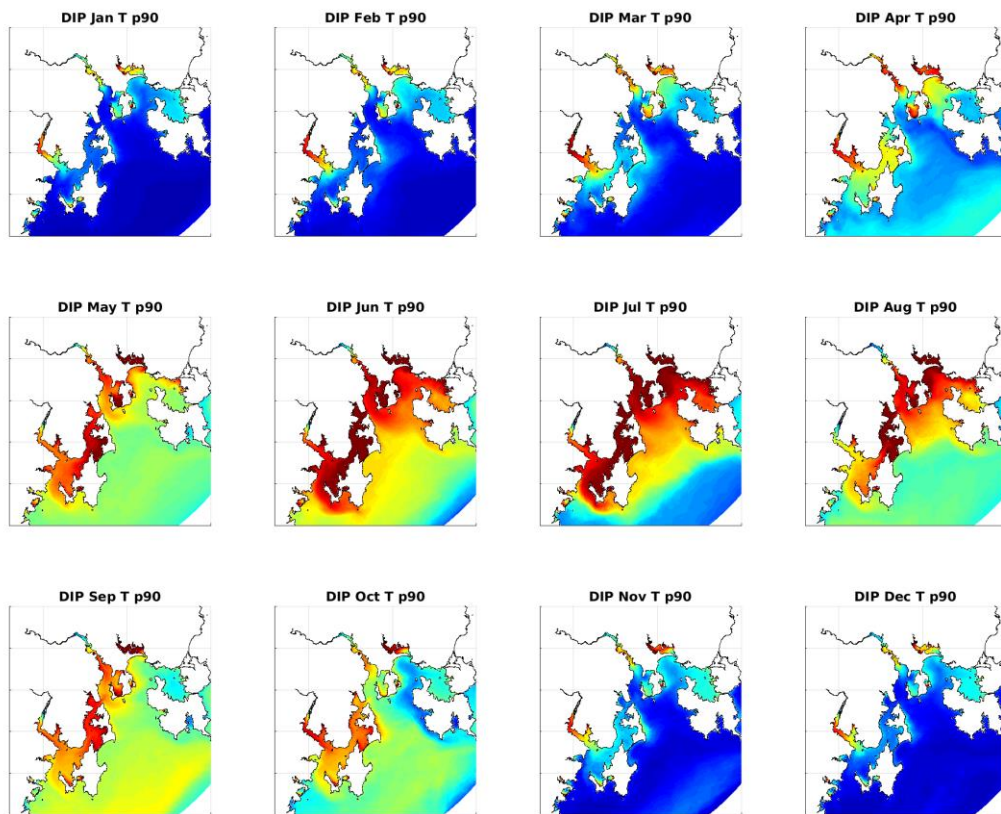
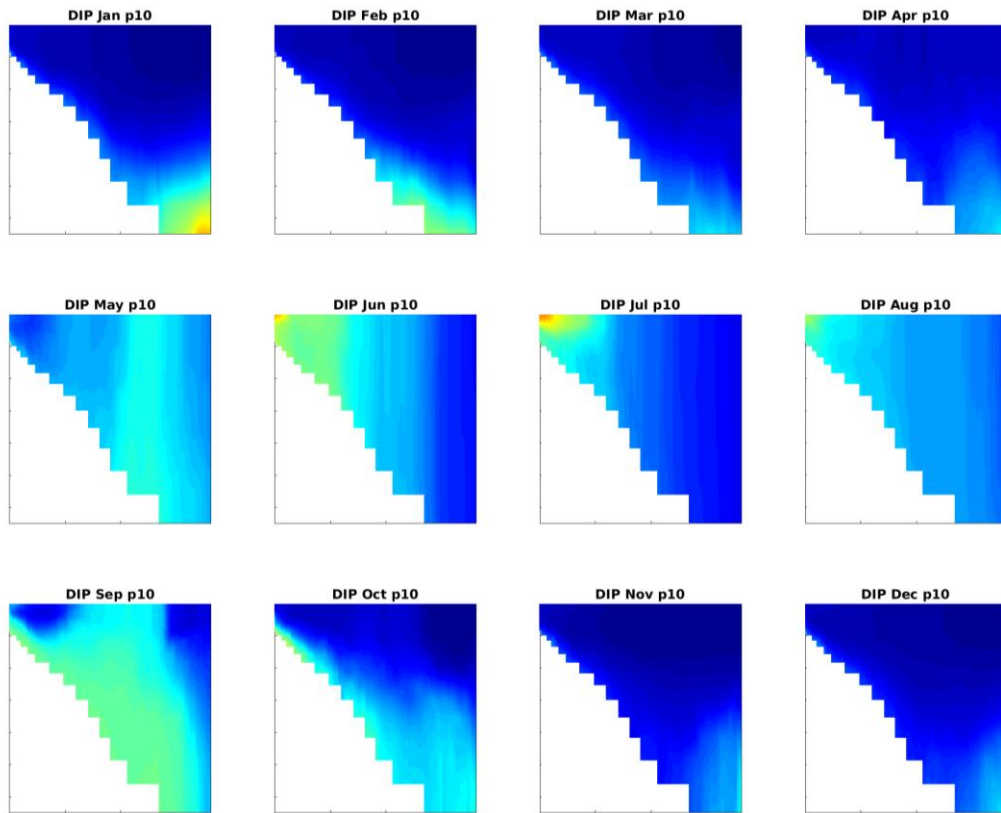




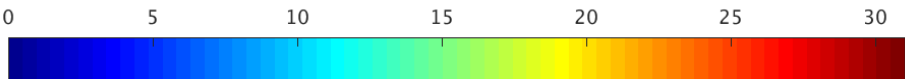
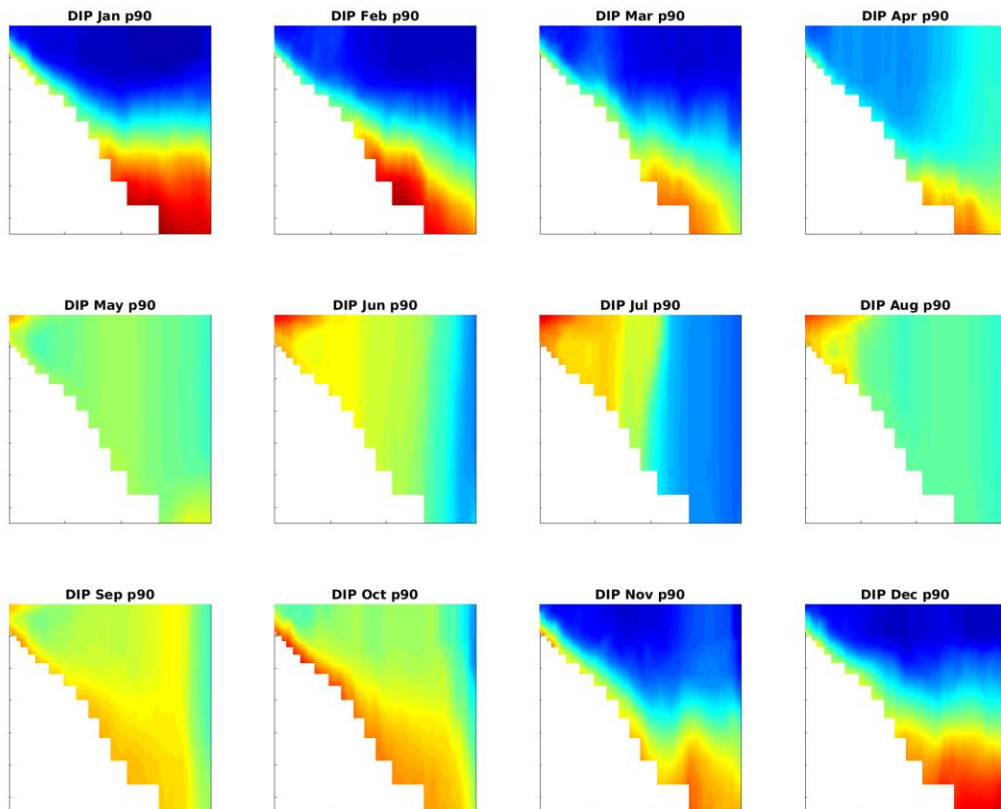
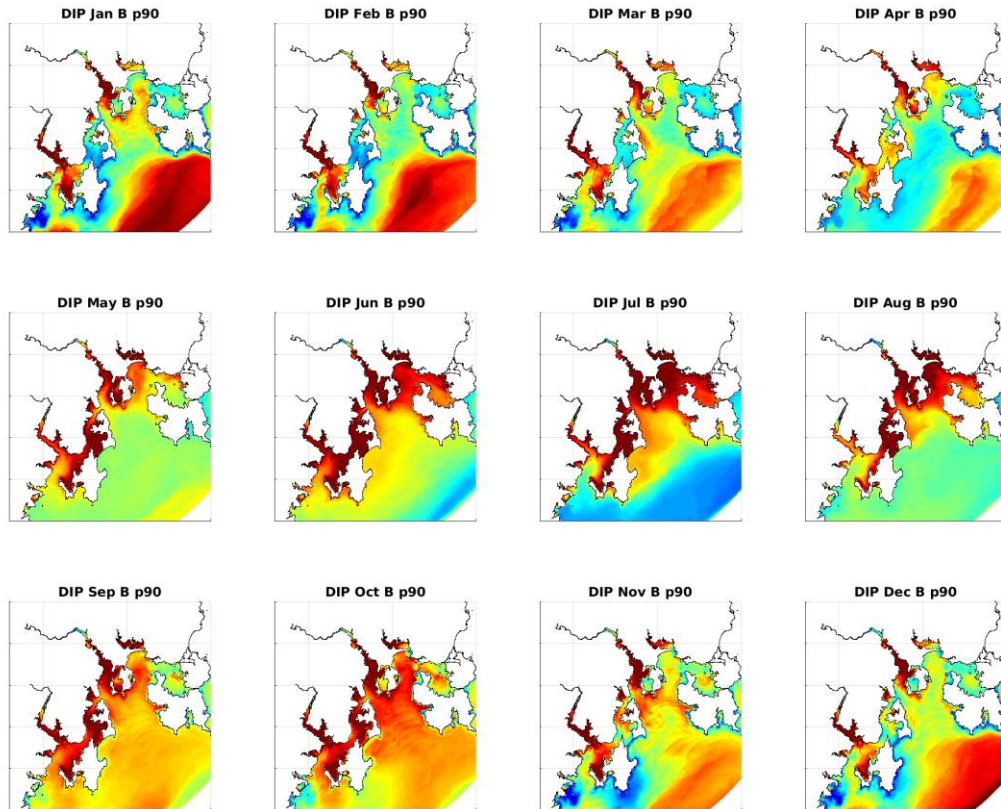


DIP mg/m<sup>3</sup>

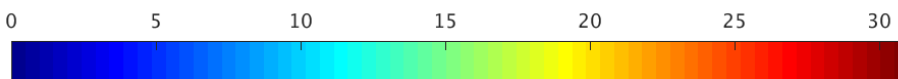
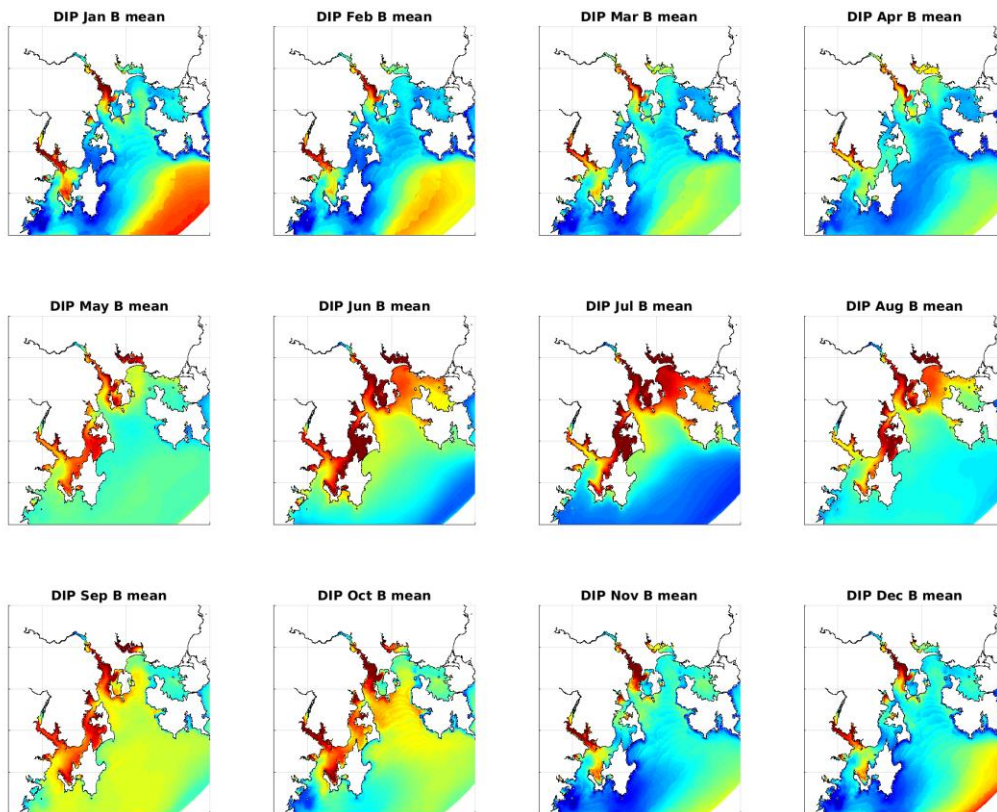
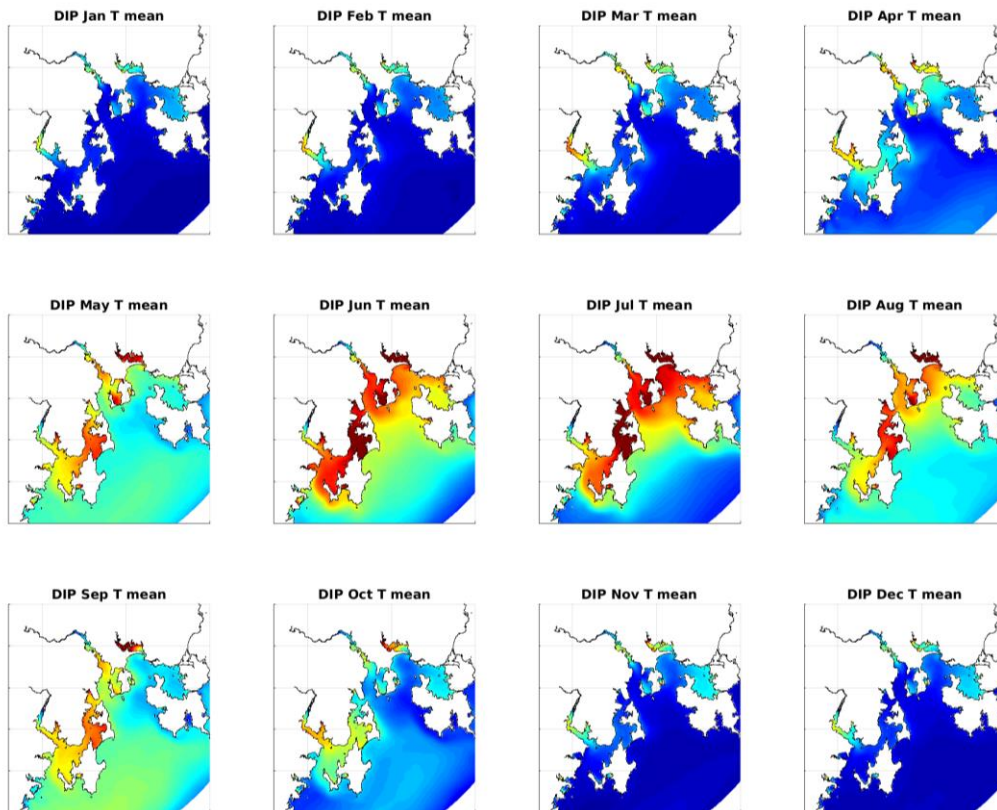




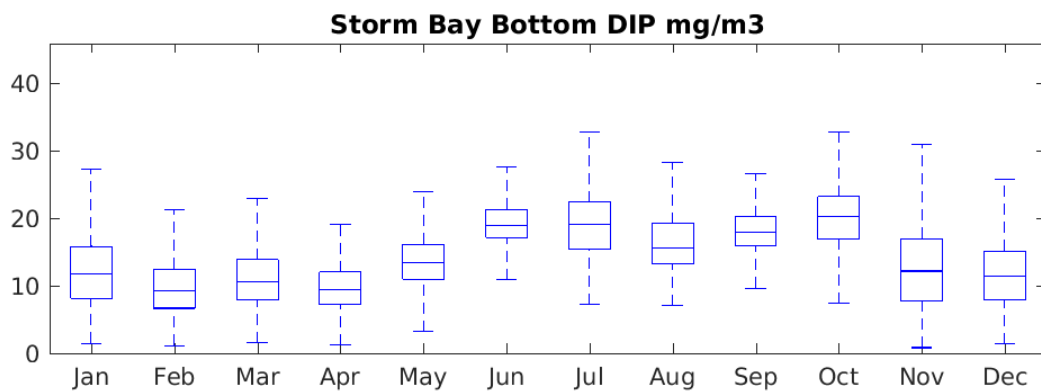
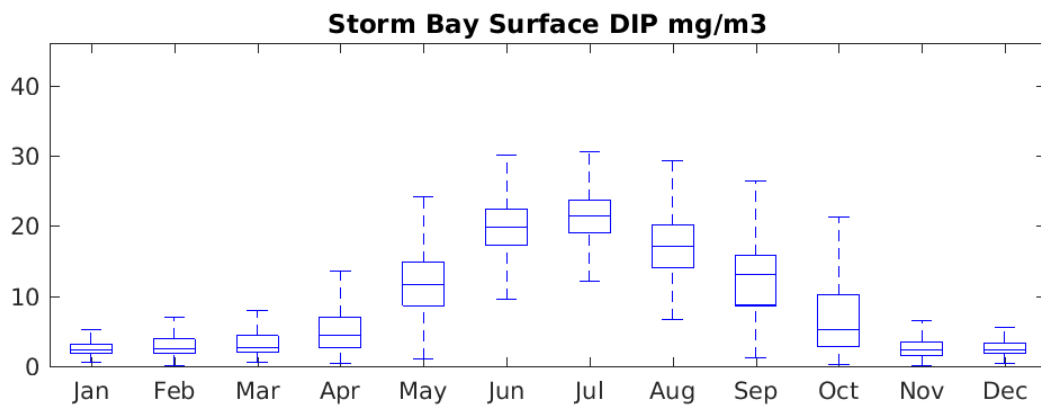
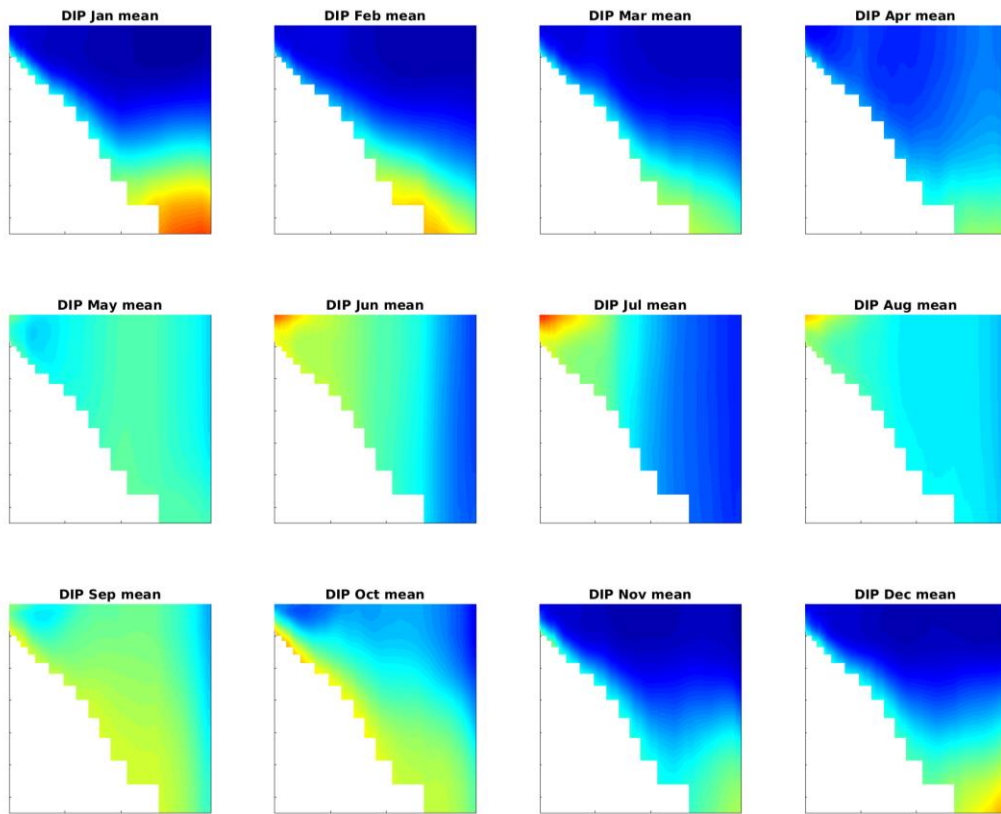
DIP mg/m3



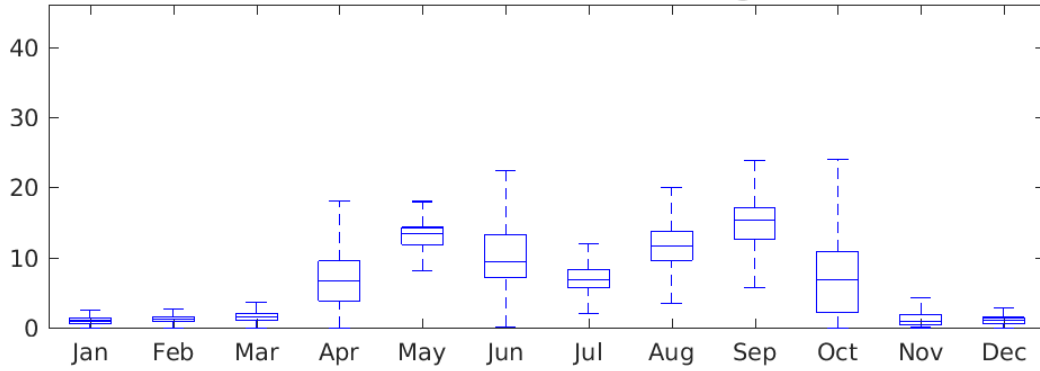
DIP mg/m3



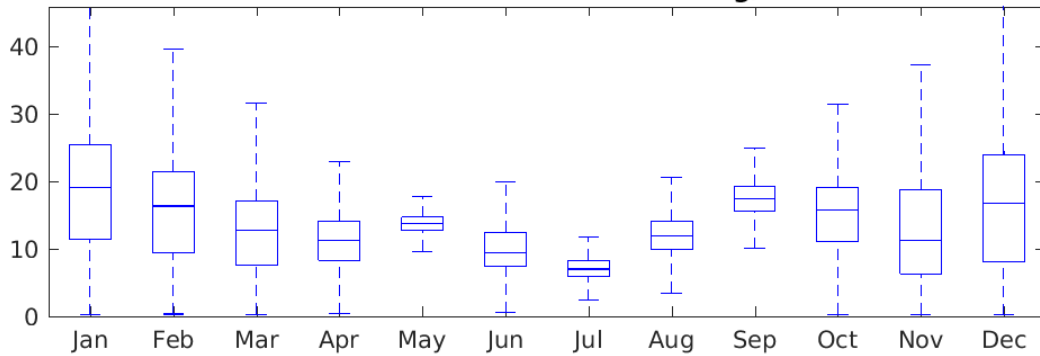
DIP mg/m3



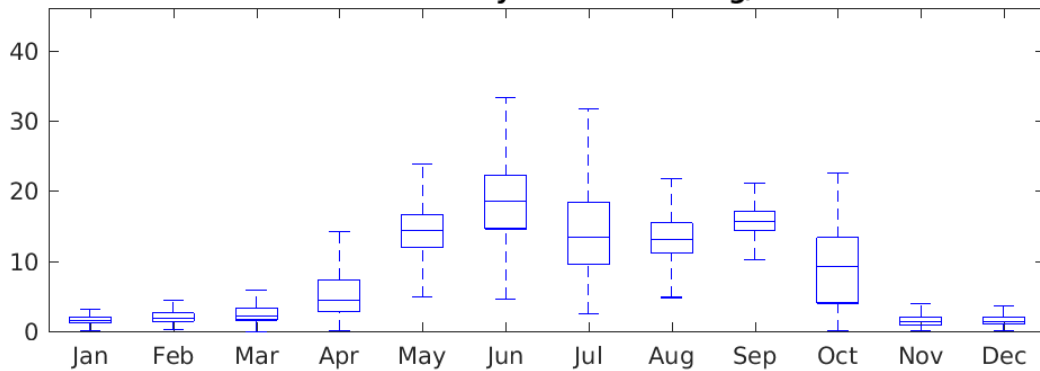
**Offshore waters Surface DIP mg/m3**



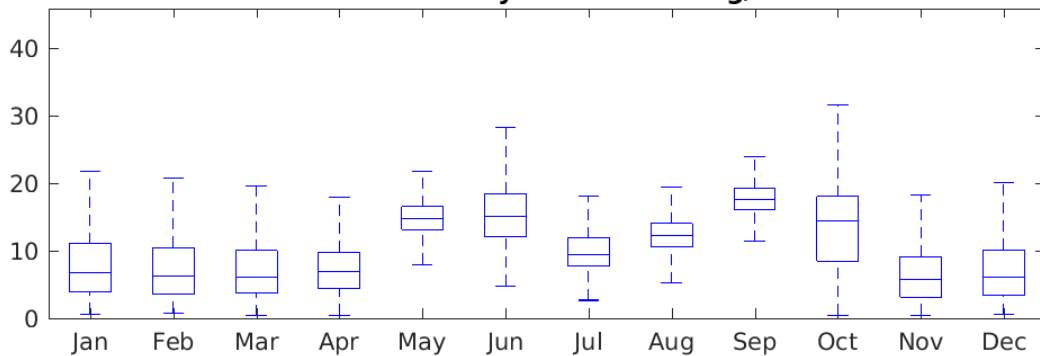
**Offshore waters Bottom DIP mg/m3**



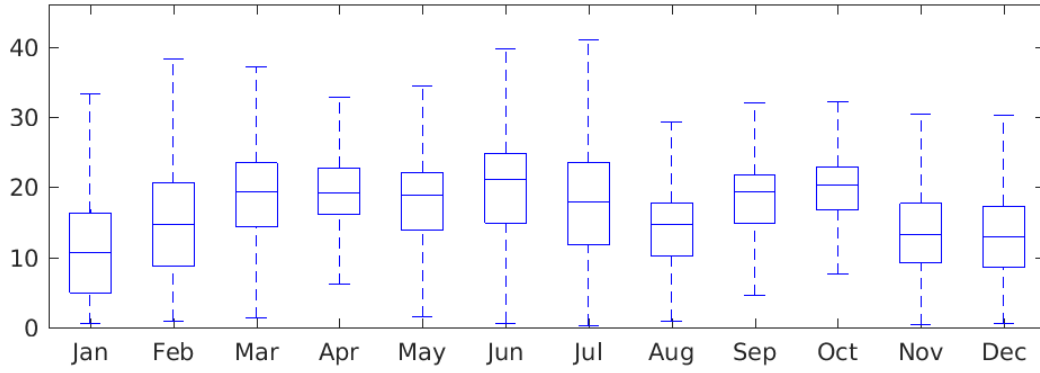
**South of Bruny Surface DIP mg/m3**



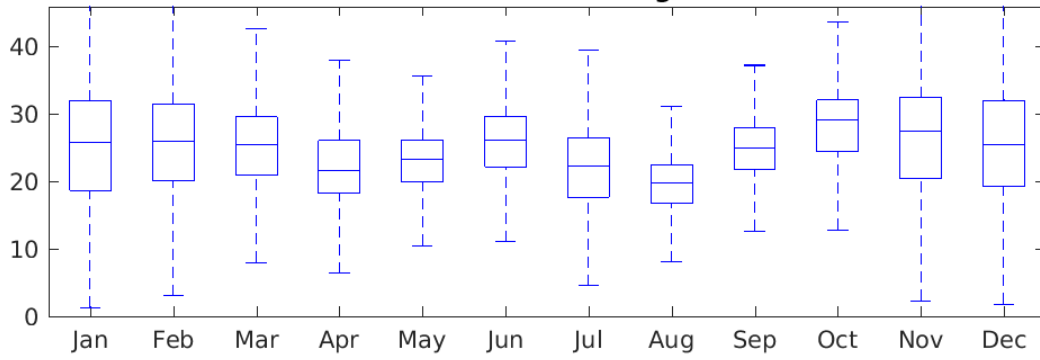
**South of Bruny Bottom DIP mg/m3**



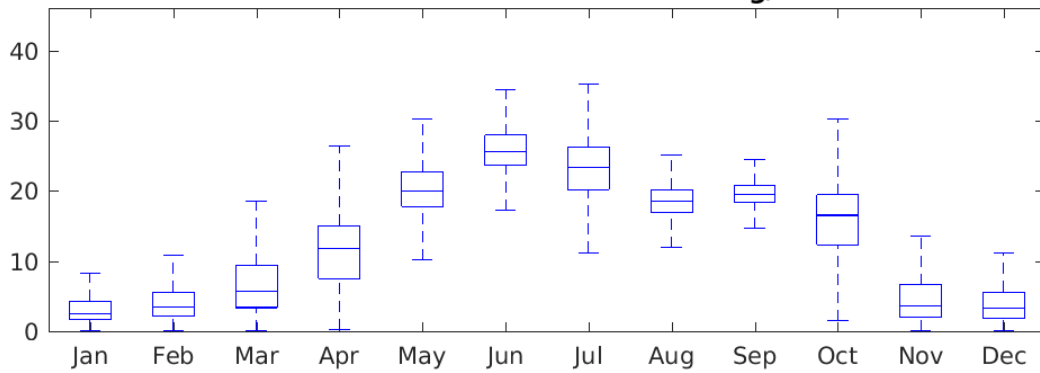
**Huon Surface DIP mg/m3**



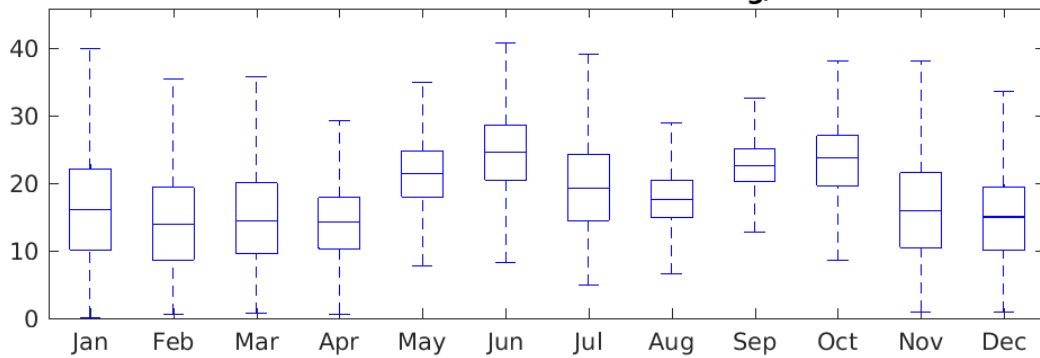
**Huon Bottom DIP mg/m3**

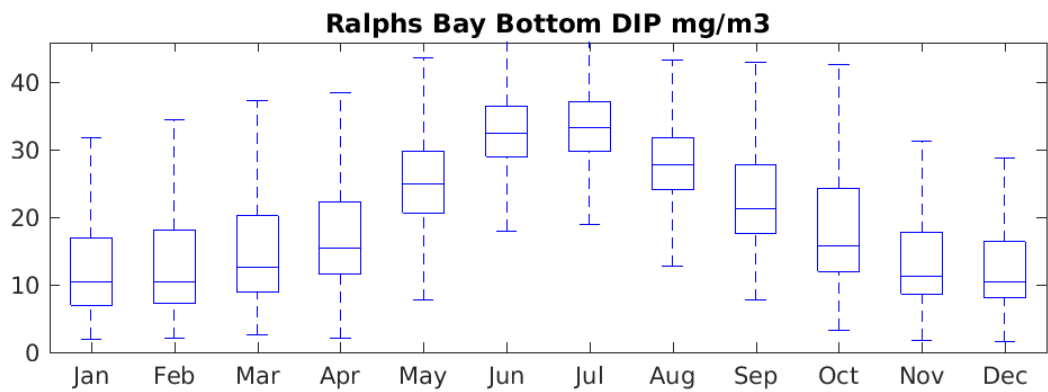
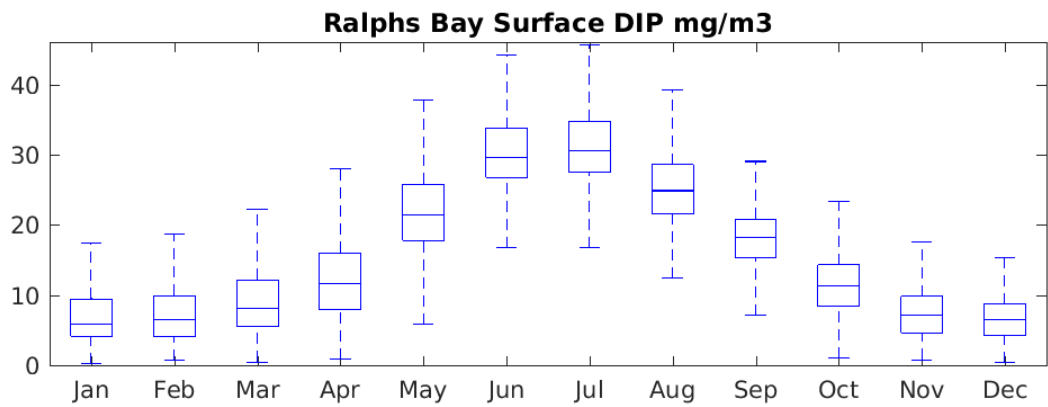
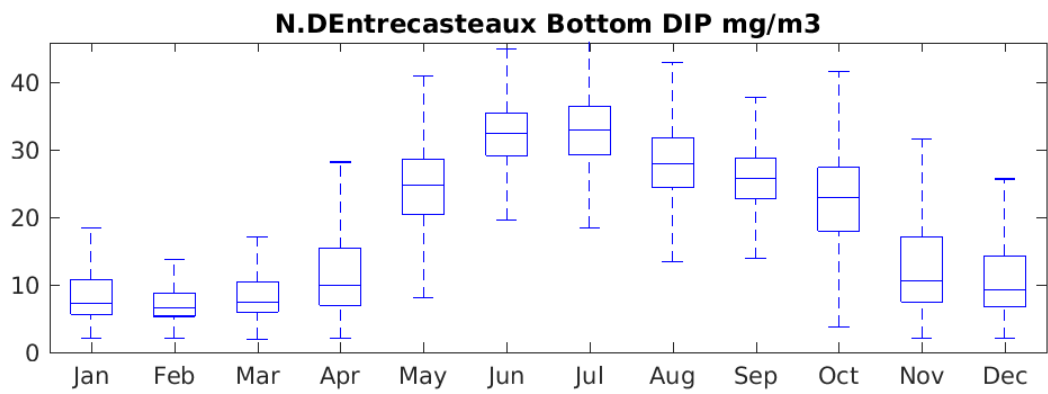
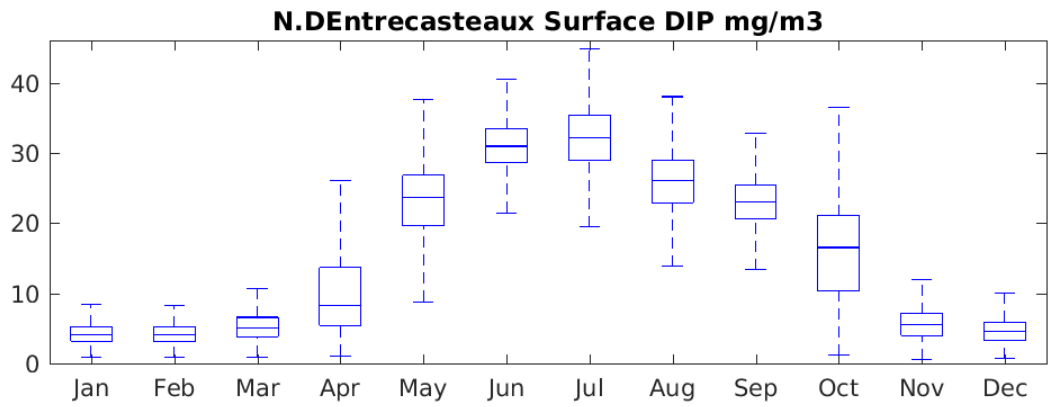


**S.D'Entrecasteaux Surface DIP mg/m3**

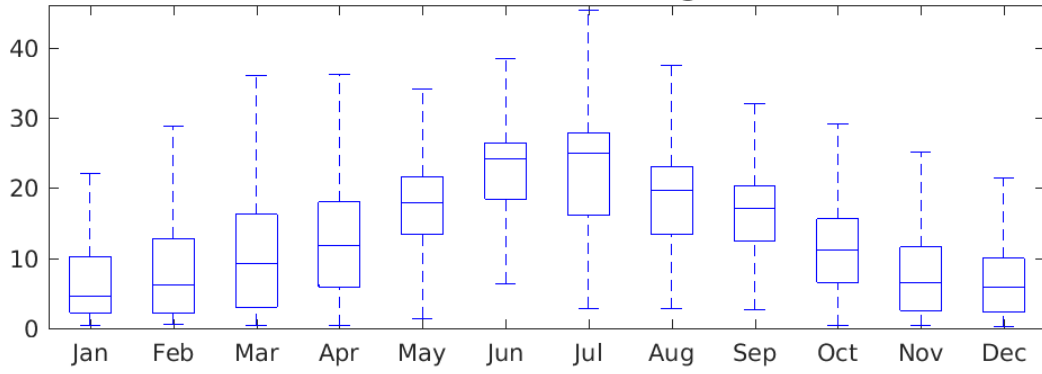


**S.D'Entrecasteaux Bottom DIP mg/m3**

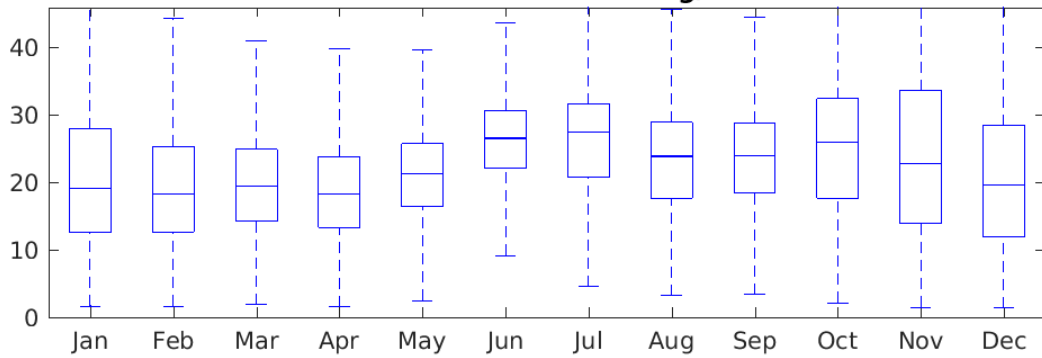




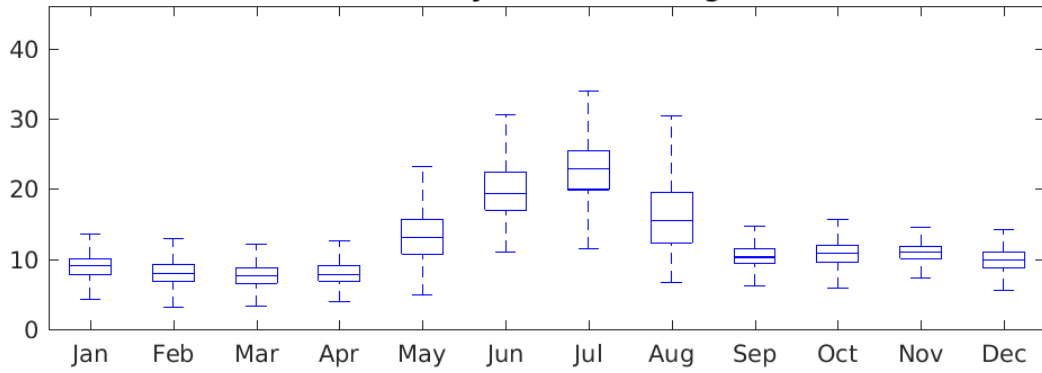
**Derwent Surface DIP mg/m3**



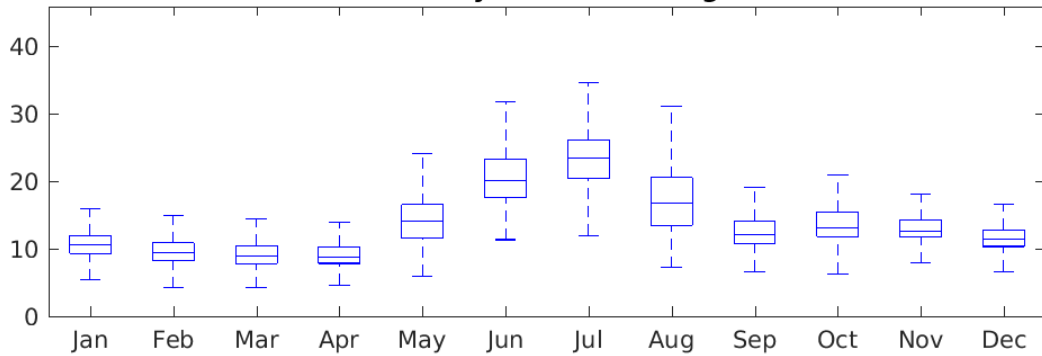
**Derwent Bottom DIP mg/m3**



**Norfolk Bay Surface DIP mg/m3**

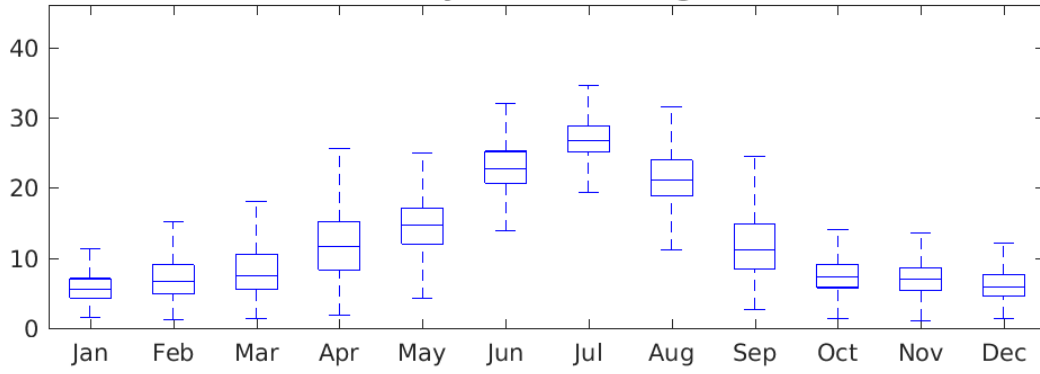


**Norfolk Bay Bottom DIP mg/m3**

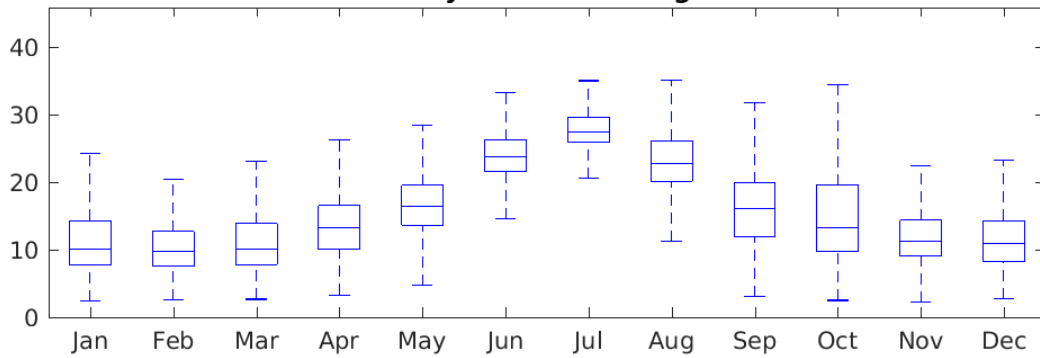




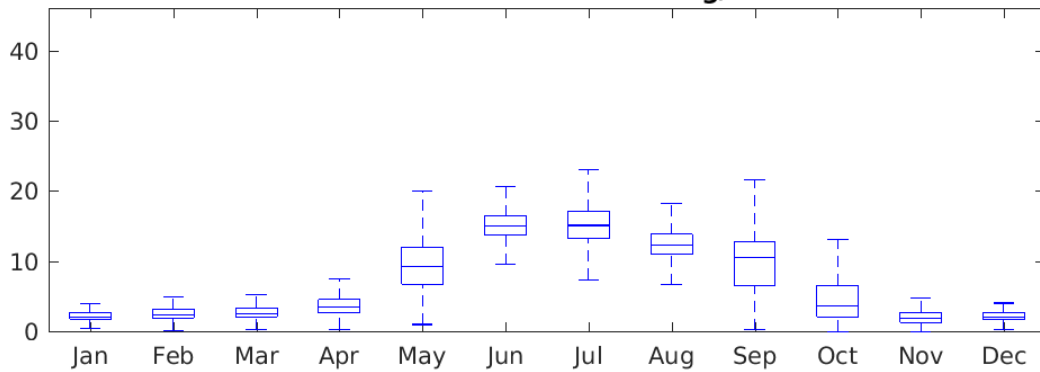
**F-H Bay Surface DIP mg/m3**



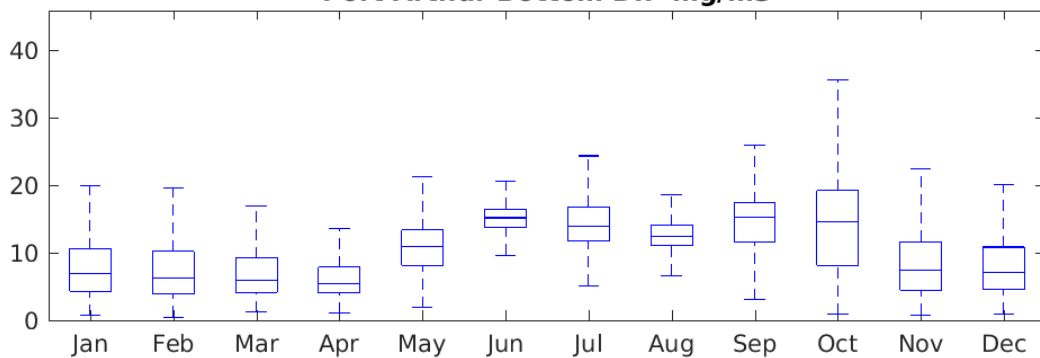
**F-H Bay Bottom DIP mg/m3**



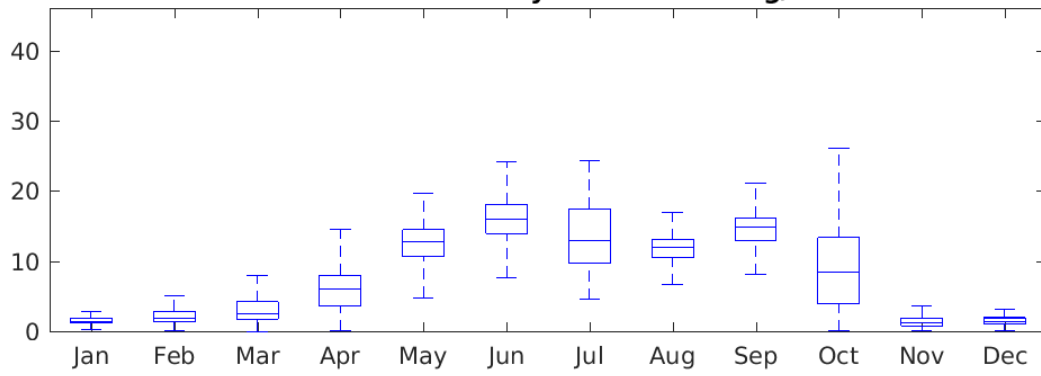
**Port Arthur Surface DIP mg/m3**



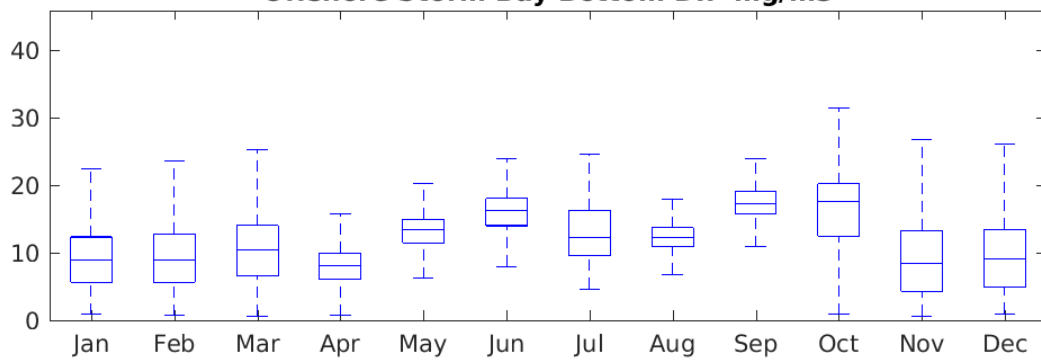
**Port Arthur Bottom DIP mg/m3**

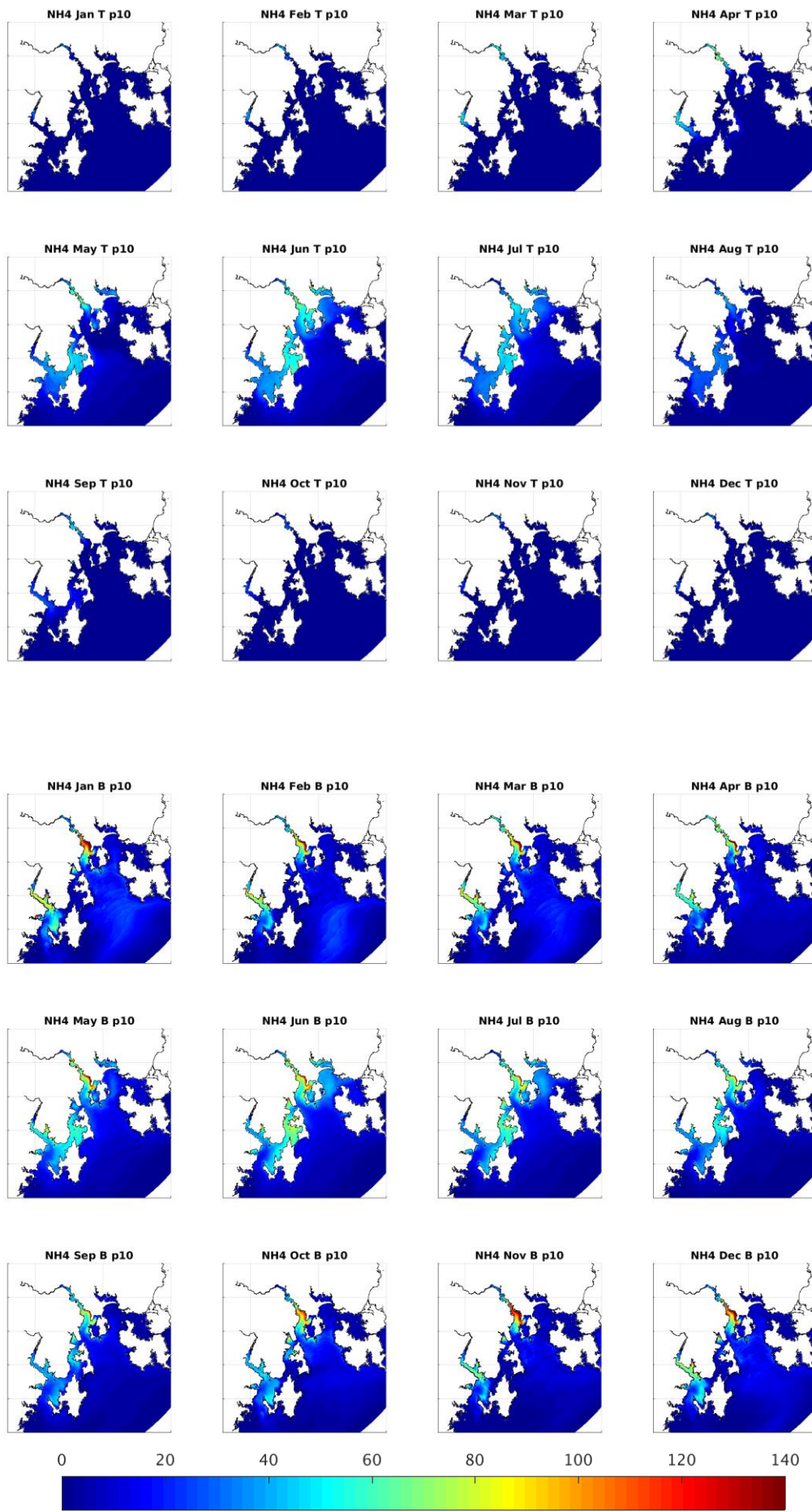


**Offshore Storm Bay Surface DIP mg/m3**

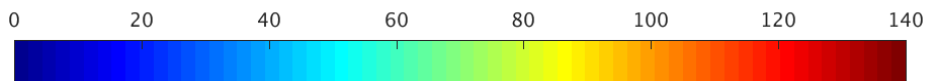
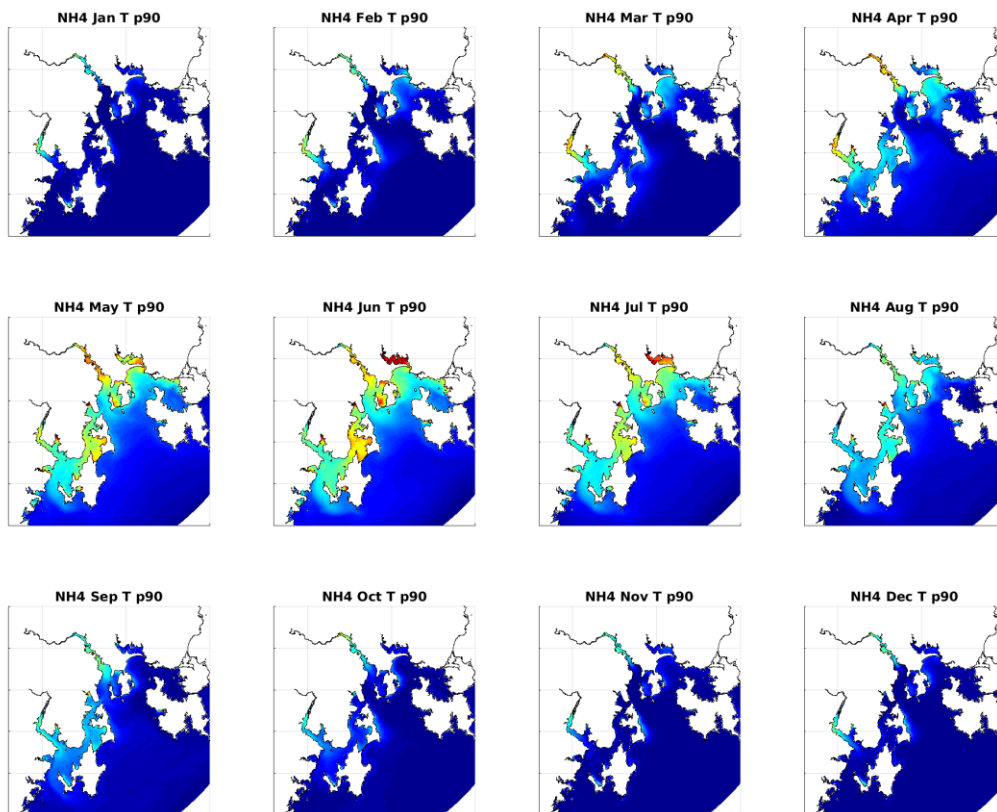
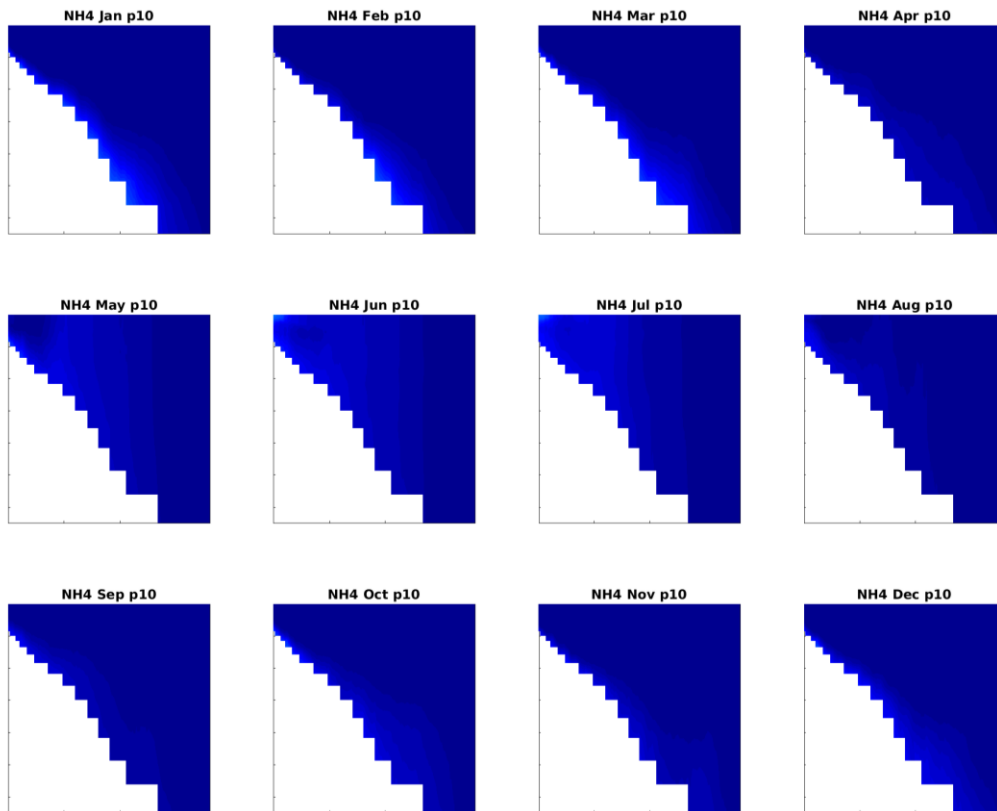


**Offshore Storm Bay Bottom DIP mg/m3**

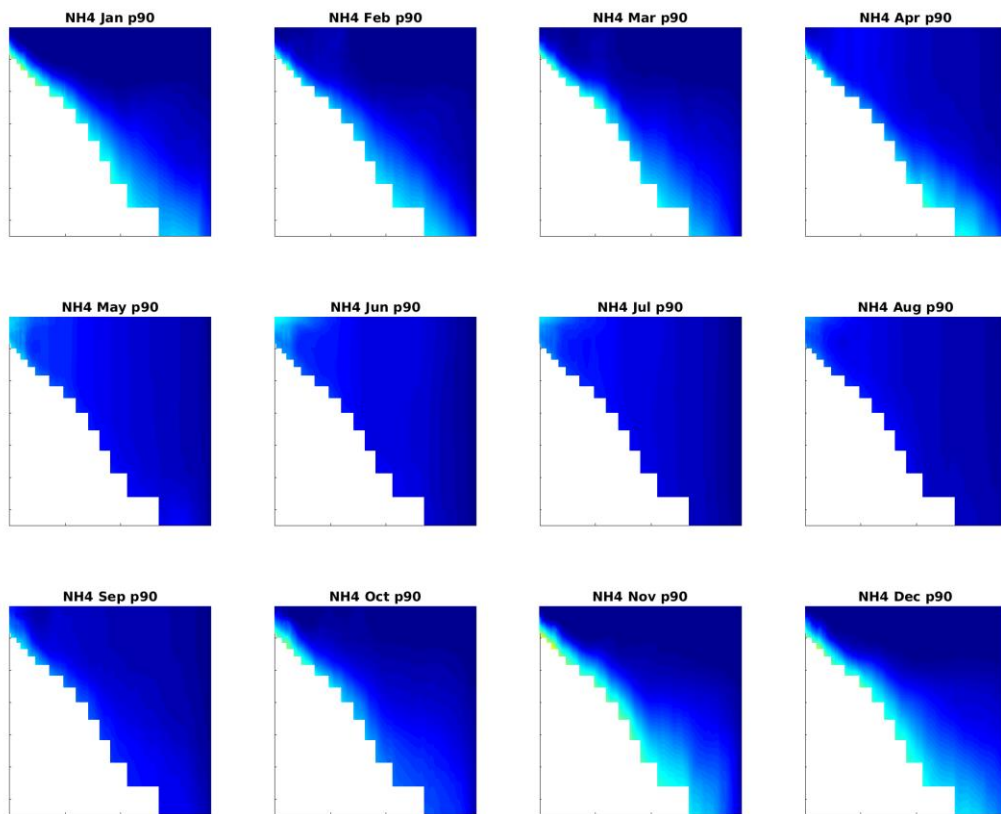
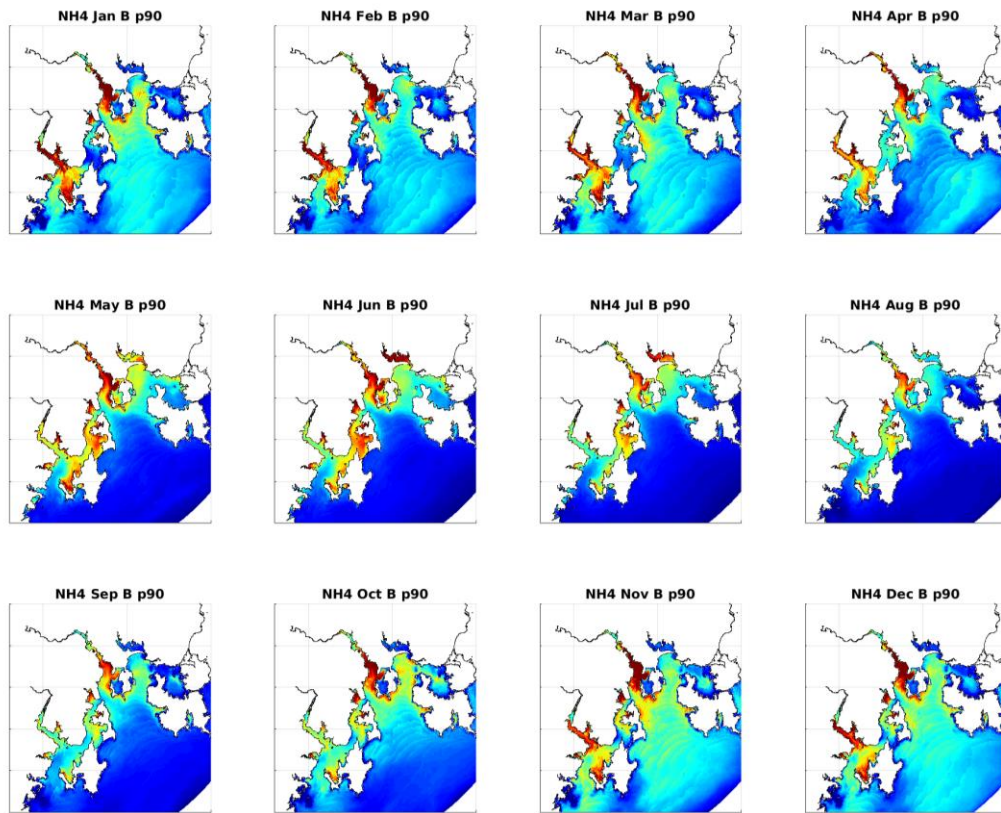




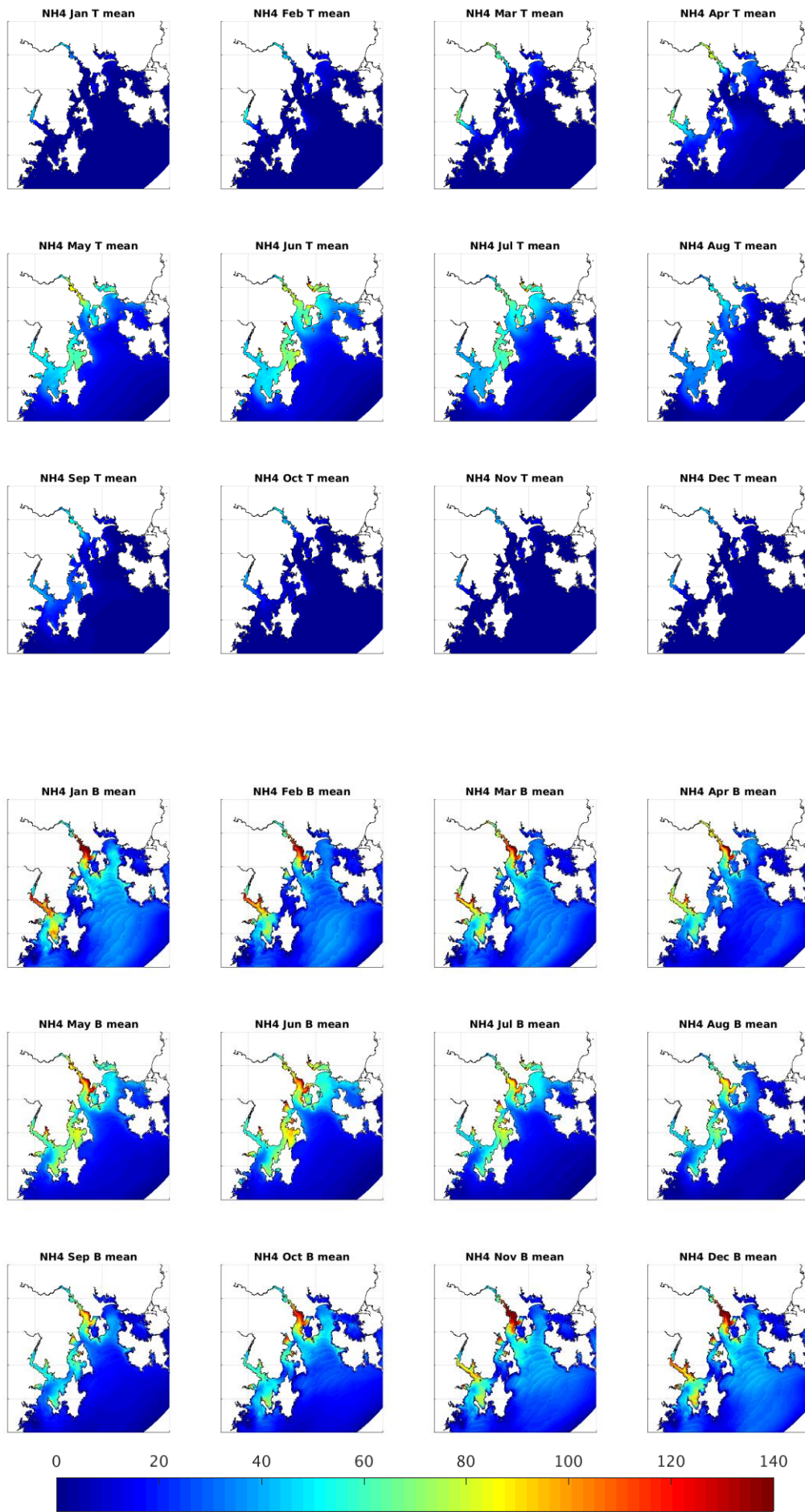
NH4 mg/m3



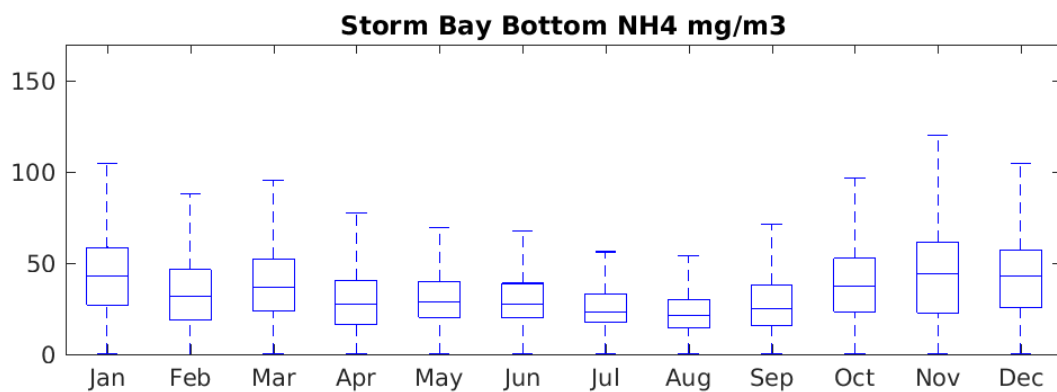
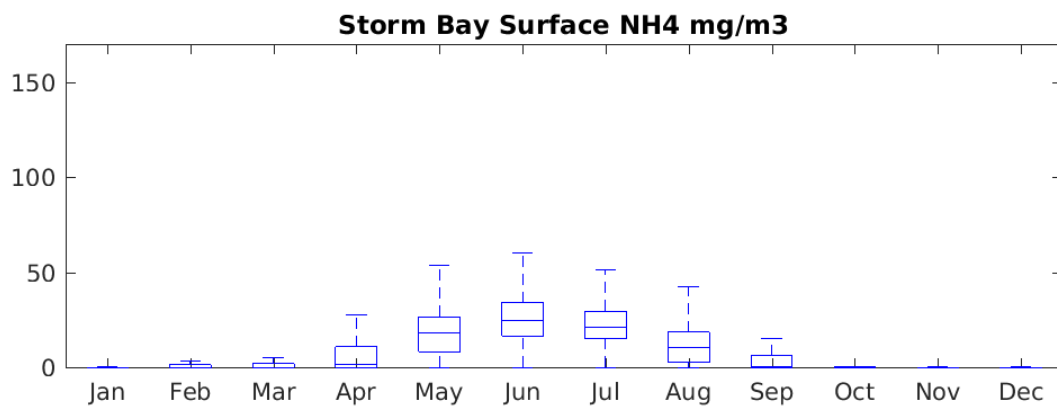
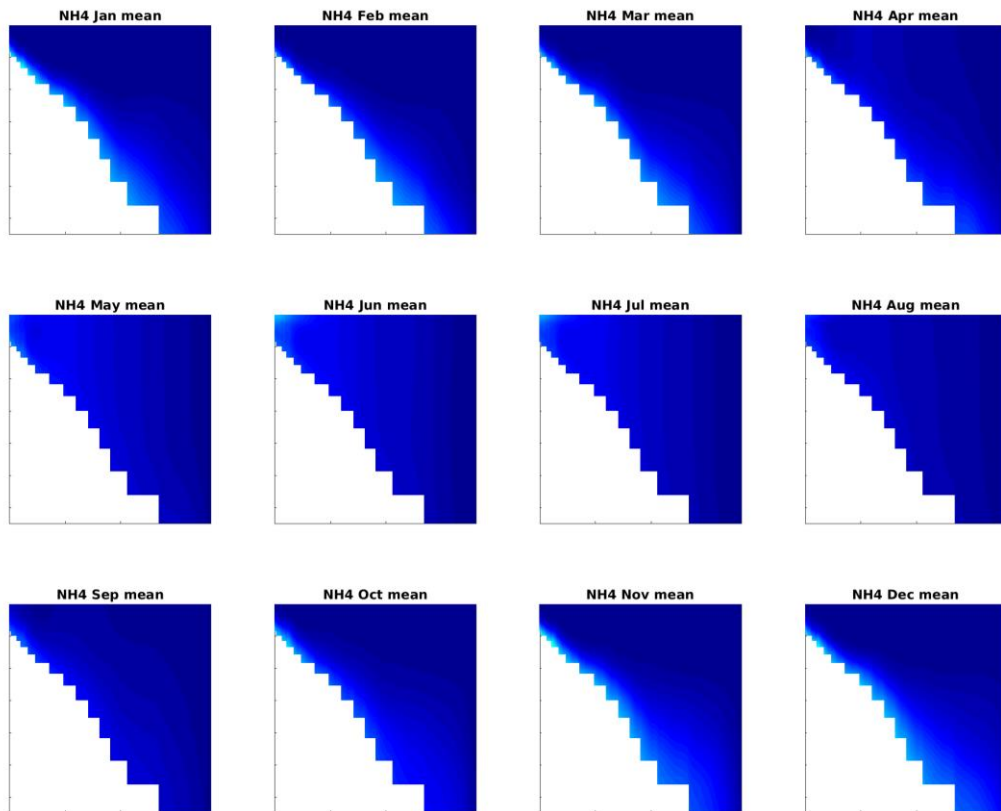
NH4 mg/m3



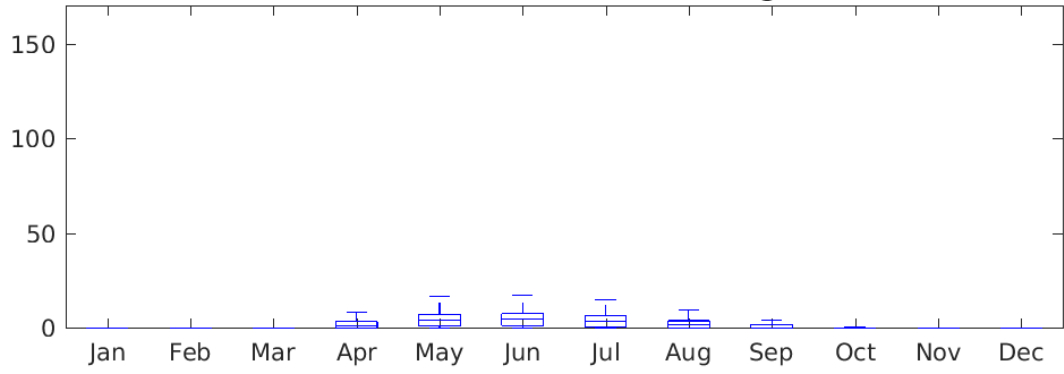
NH4 mg/m3



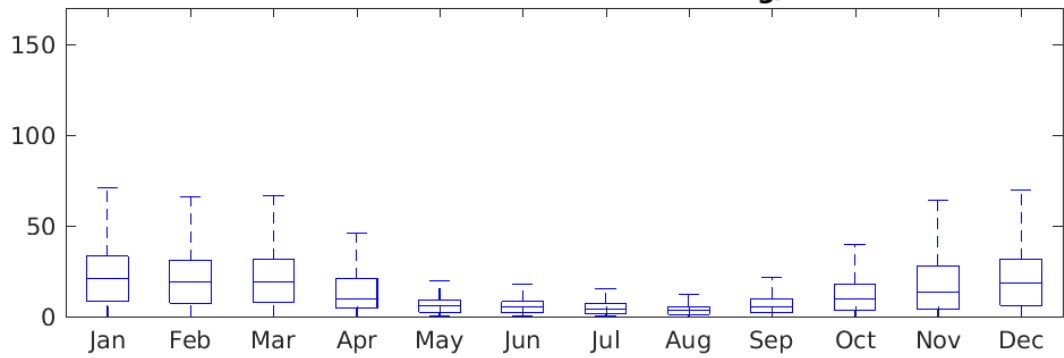
NH<sub>4</sub> mg/m<sup>3</sup>



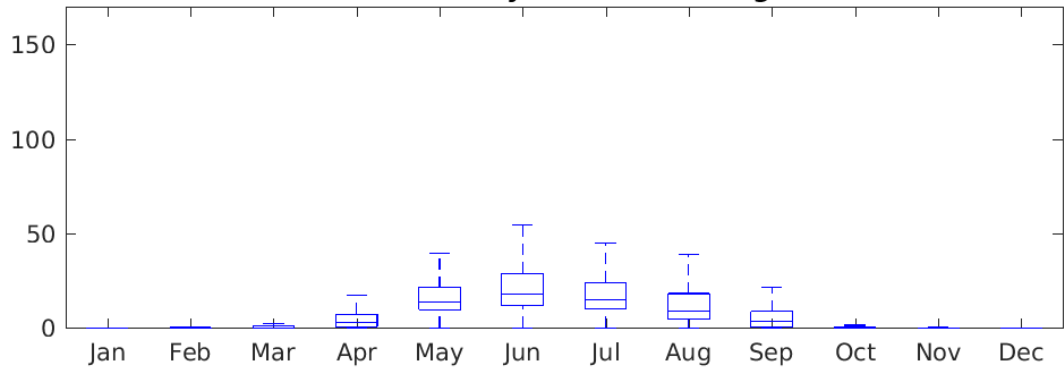
**Offshore waters Surface NH4 mg/m3**



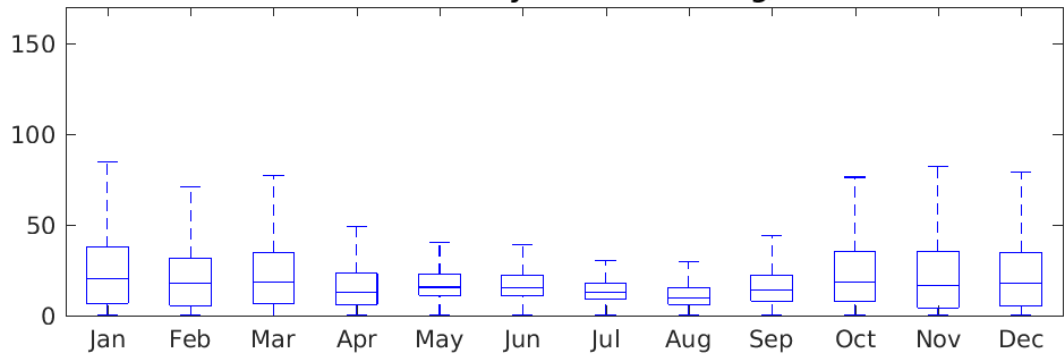
**Offshore waters Bottom NH4 mg/m3**



**South of Bruny Surface NH4 mg/m3**

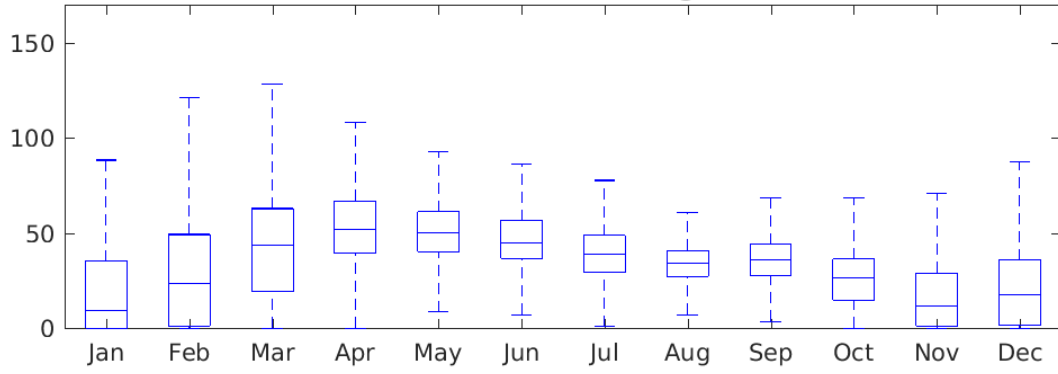


**South of Bruny Bottom NH4 mg/m3**

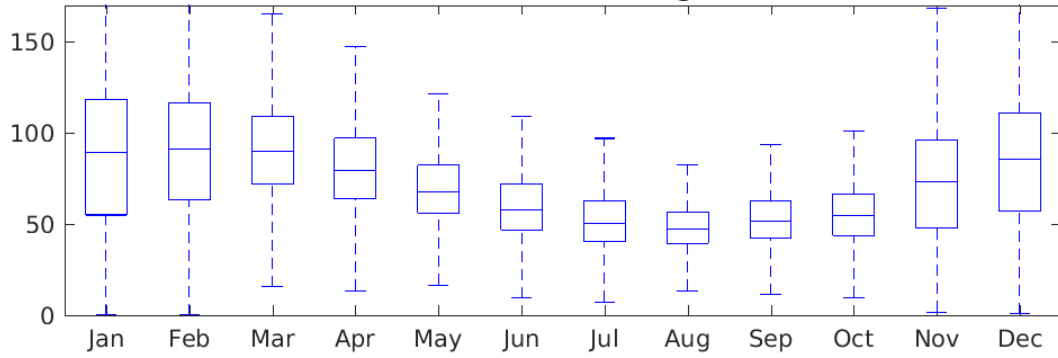




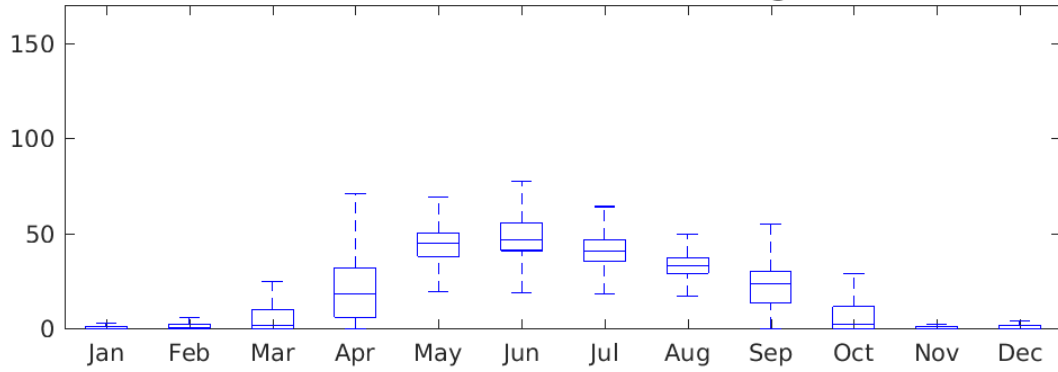
**Huon Surface NH4 mg/m3**



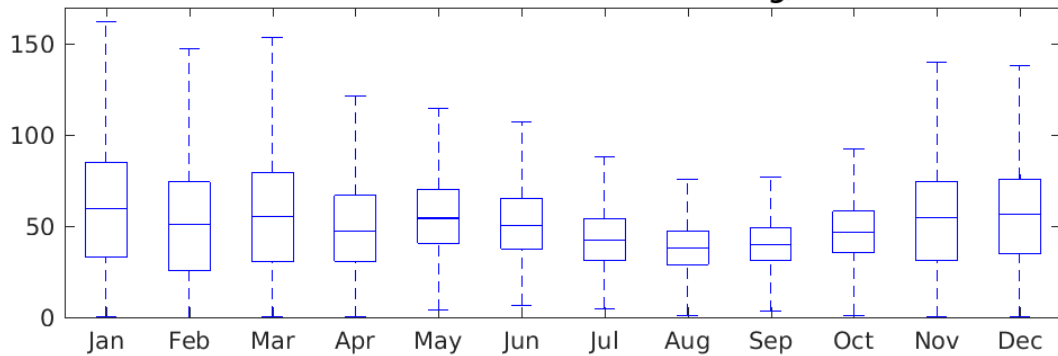
**Huon Bottom NH4 mg/m3**



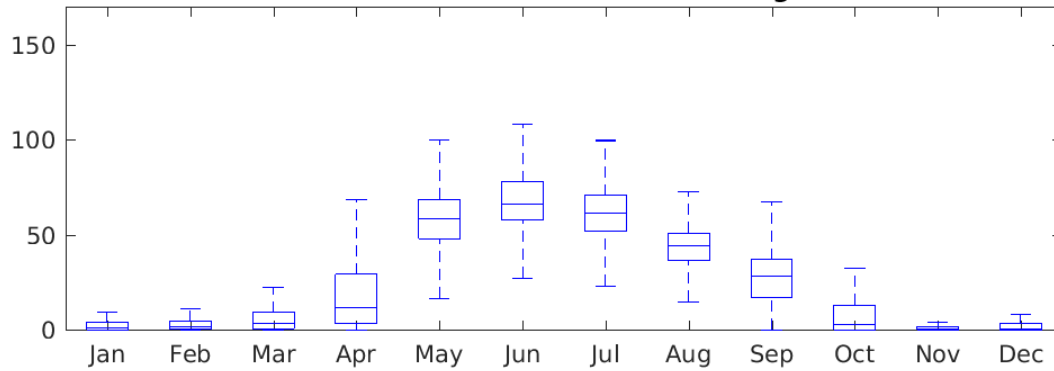
**S.D'Entrecasteaux Surface NH4 mg/m3**



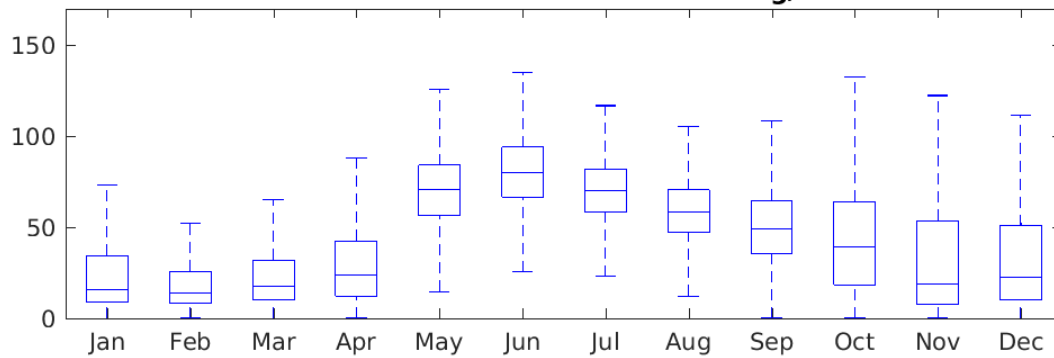
**S.D'Entrecasteaux Bottom NH4 mg/m3**



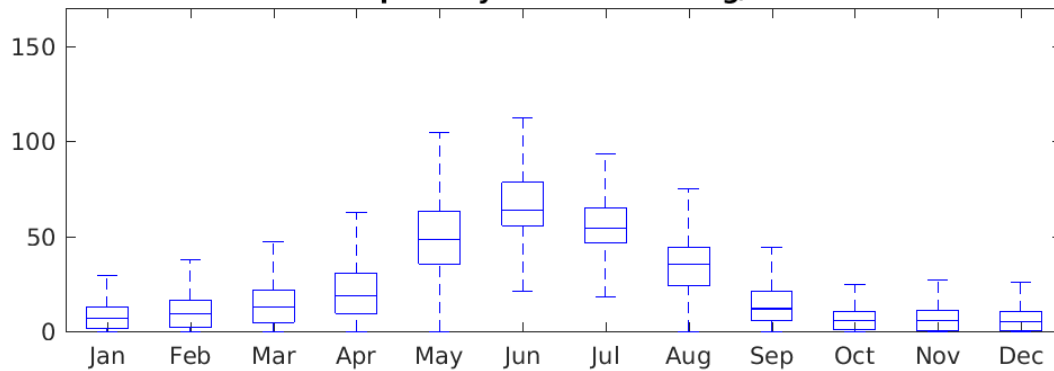
**N.Dentrecaesteaux Surface NH4 mg/m3**



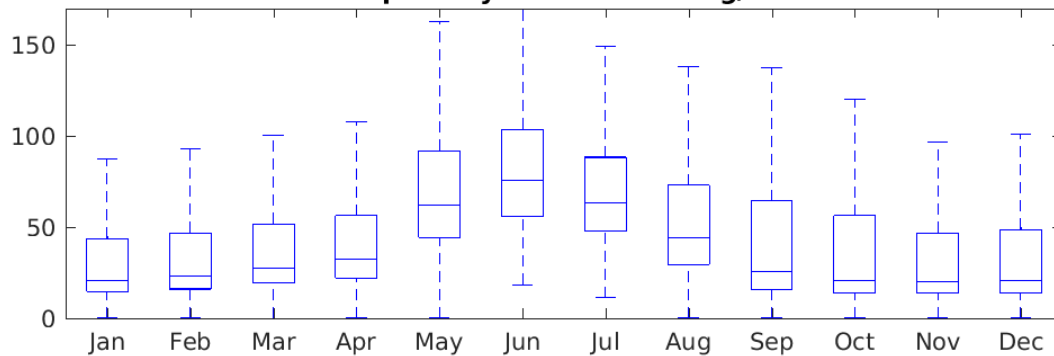
**N.Dentrecaesteaux Bottom NH4 mg/m3**

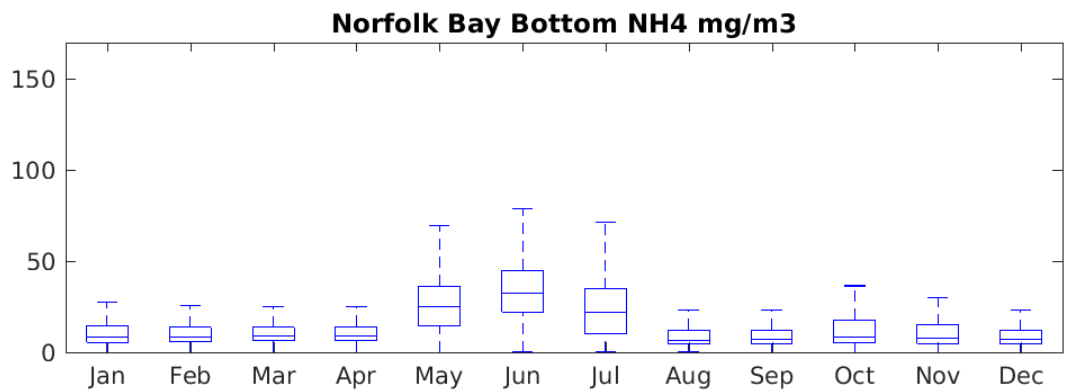
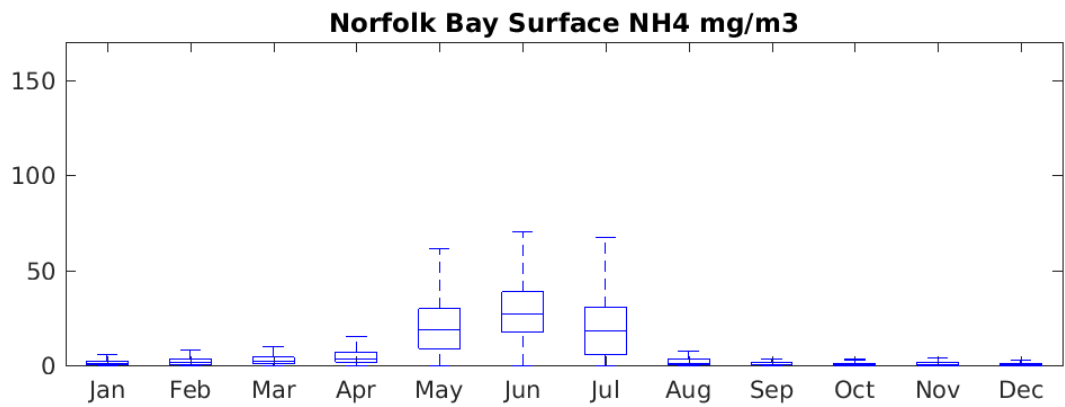
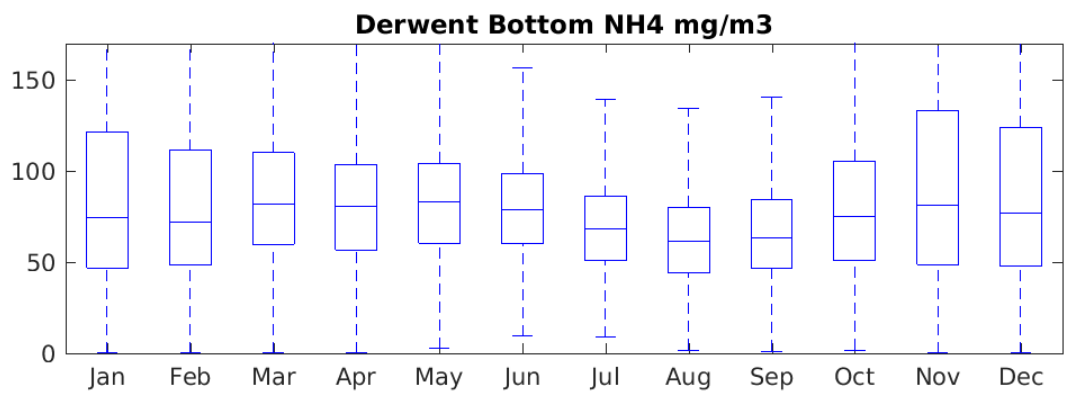
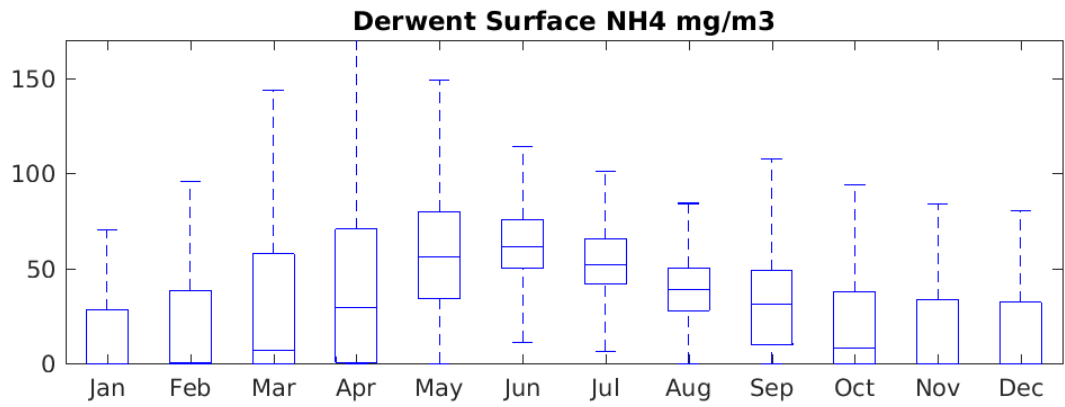


**Ralphps Bay Surface NH4 mg/m3**

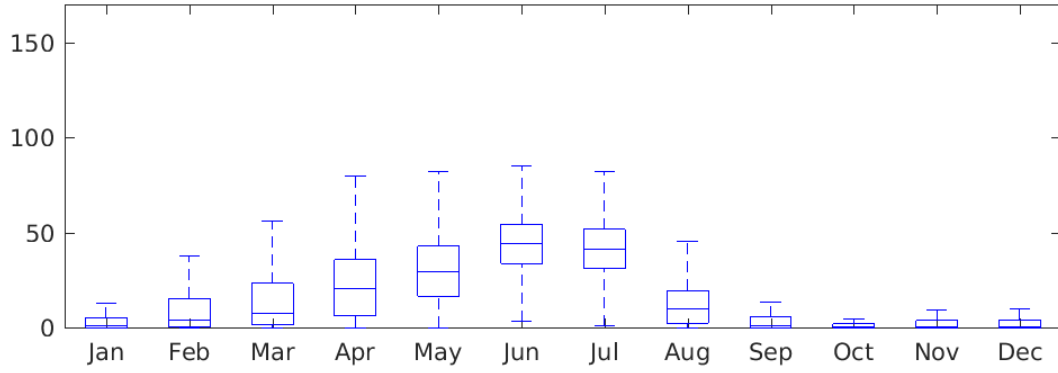


**Ralphps Bay Bottom NH4 mg/m3**

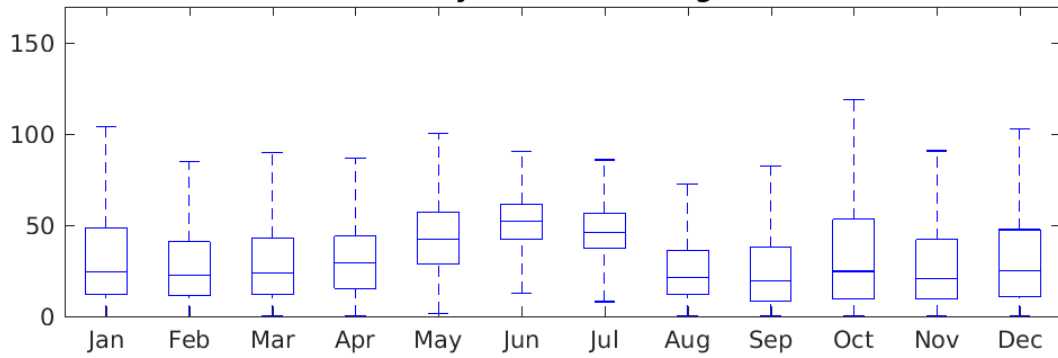




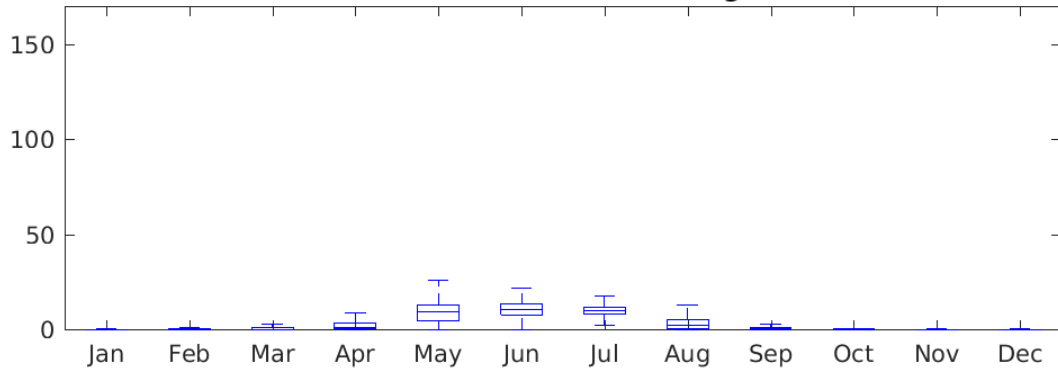
**F-H Bay Surface NH4 mg/m3**



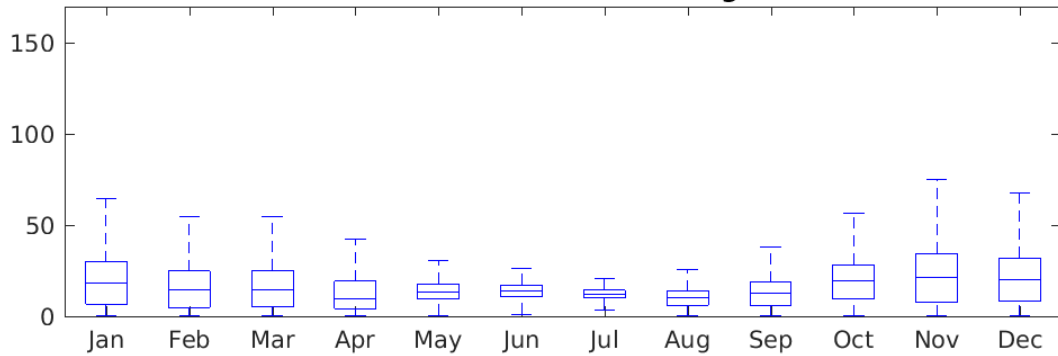
**F-H Bay Bottom NH4 mg/m3**

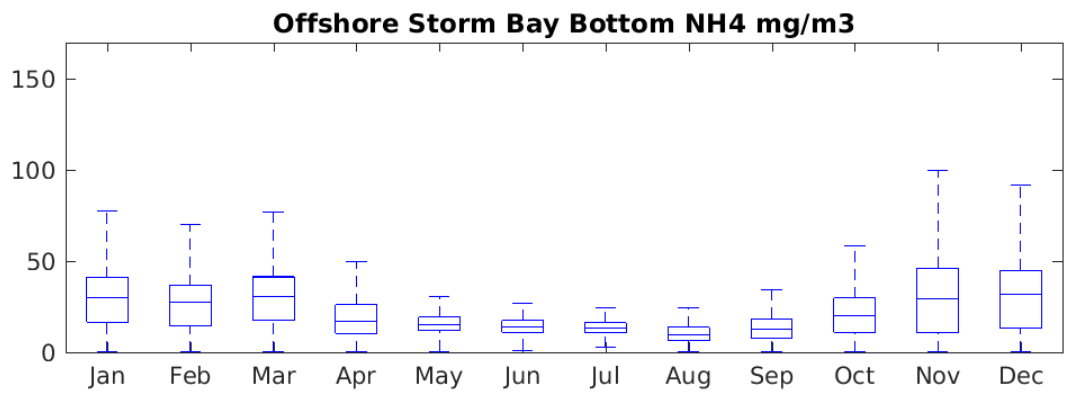
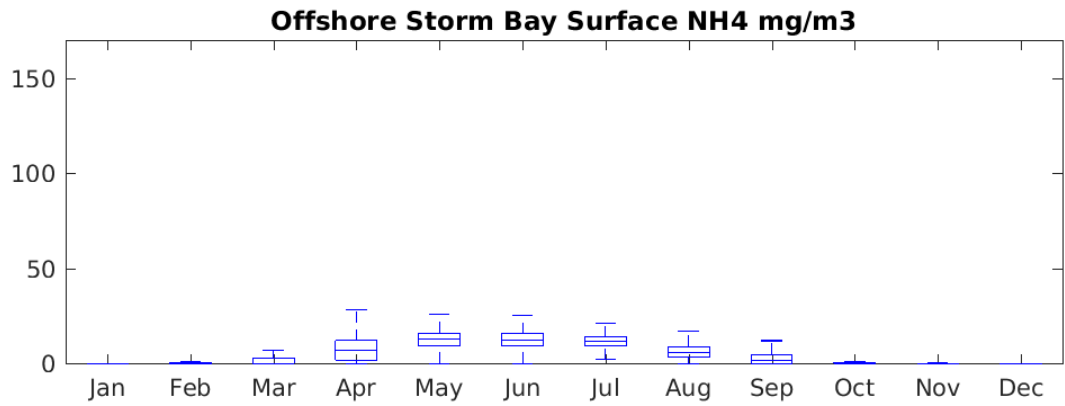


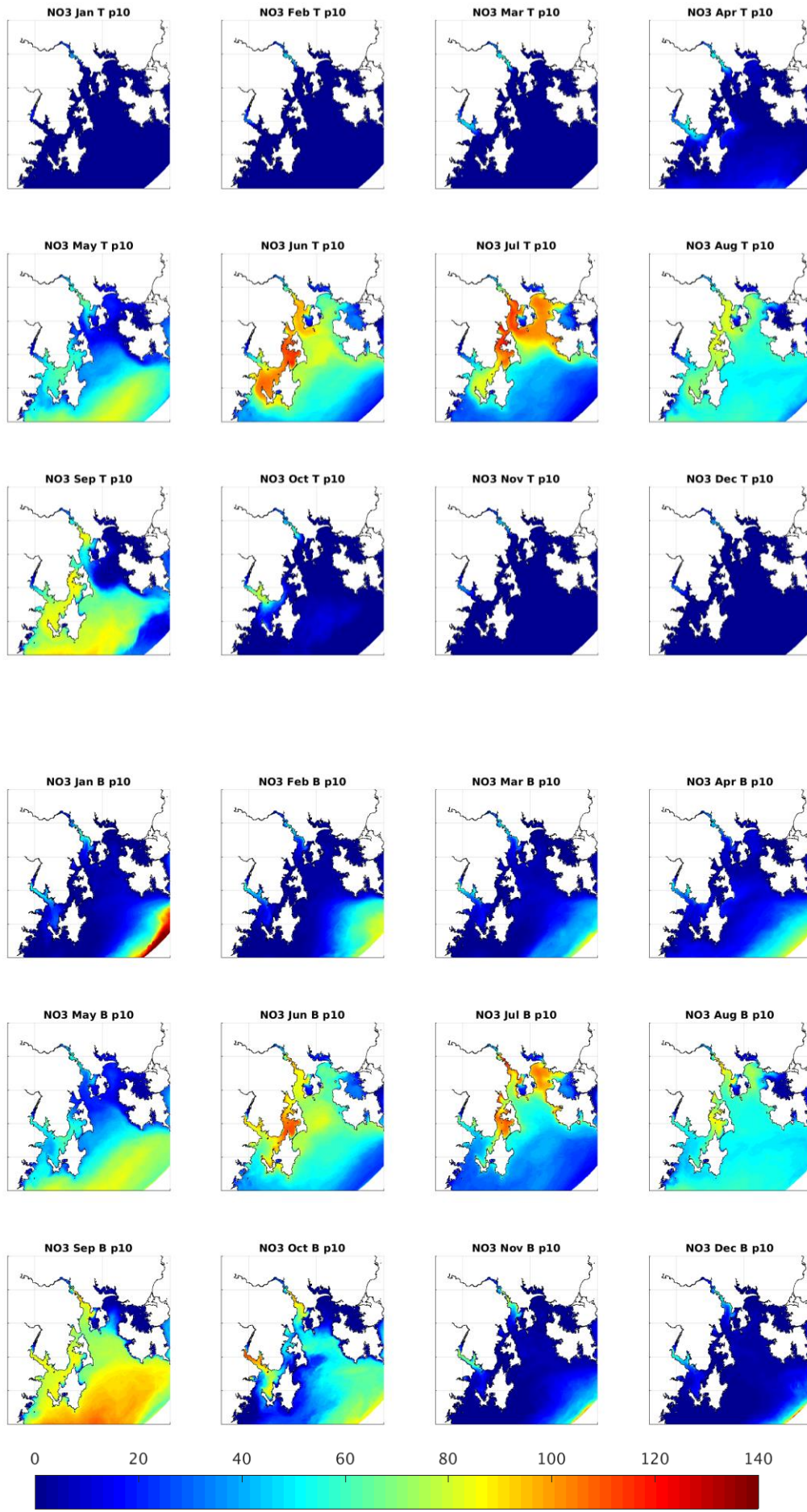
**Port Arthur Surface NH4 mg/m3**



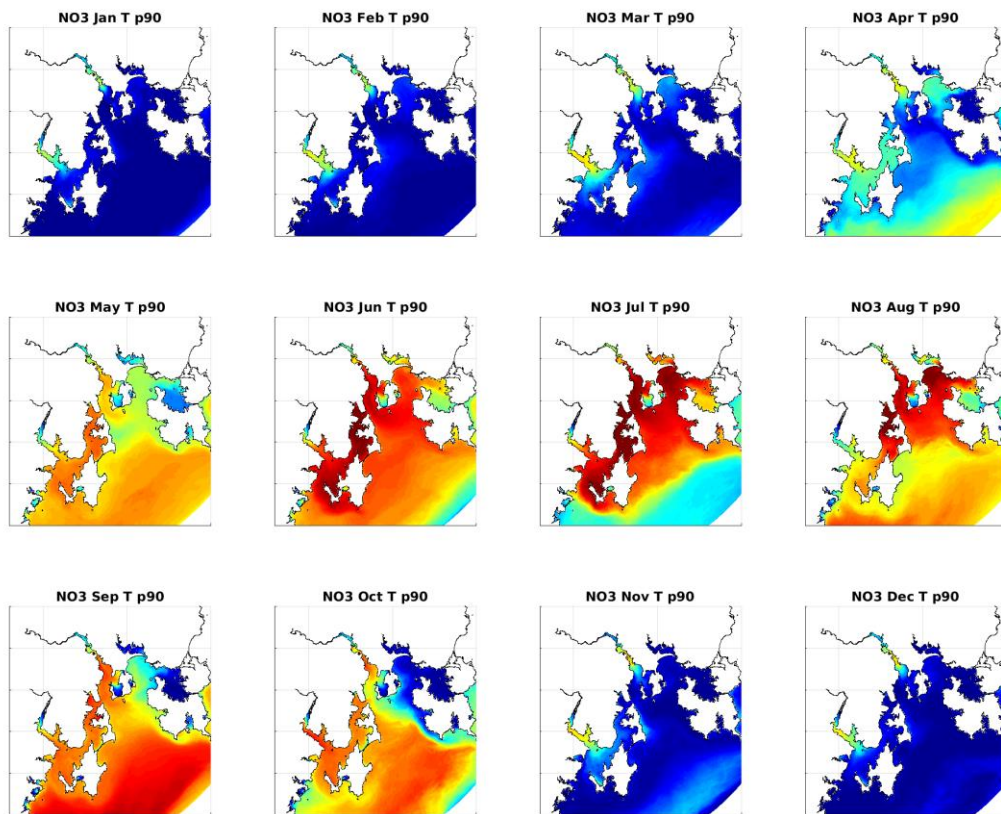
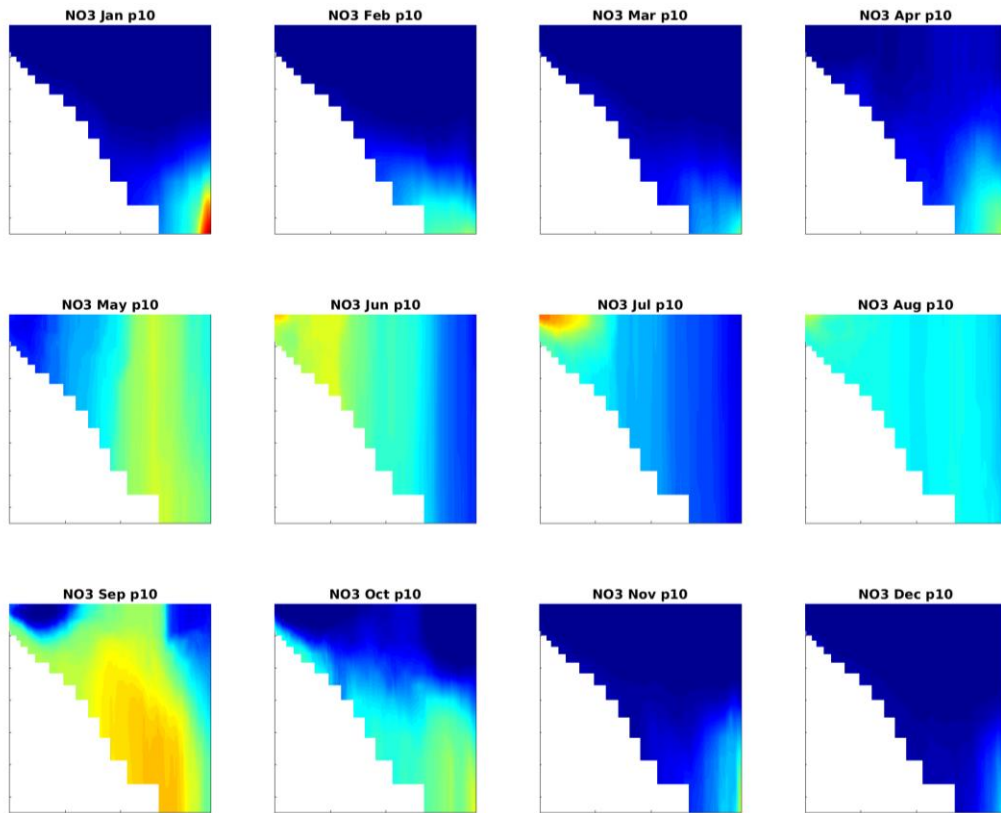
**Port Arthur Bottom NH4 mg/m3**



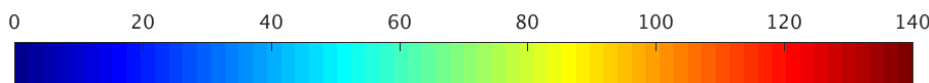
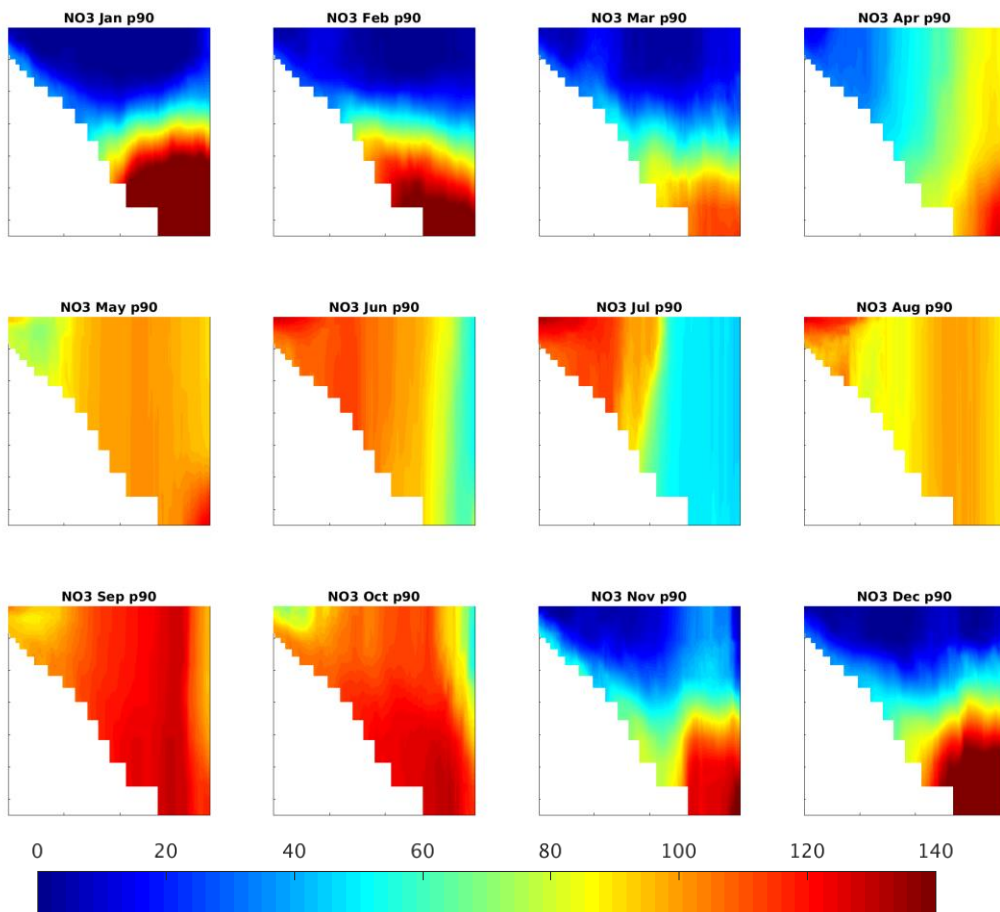
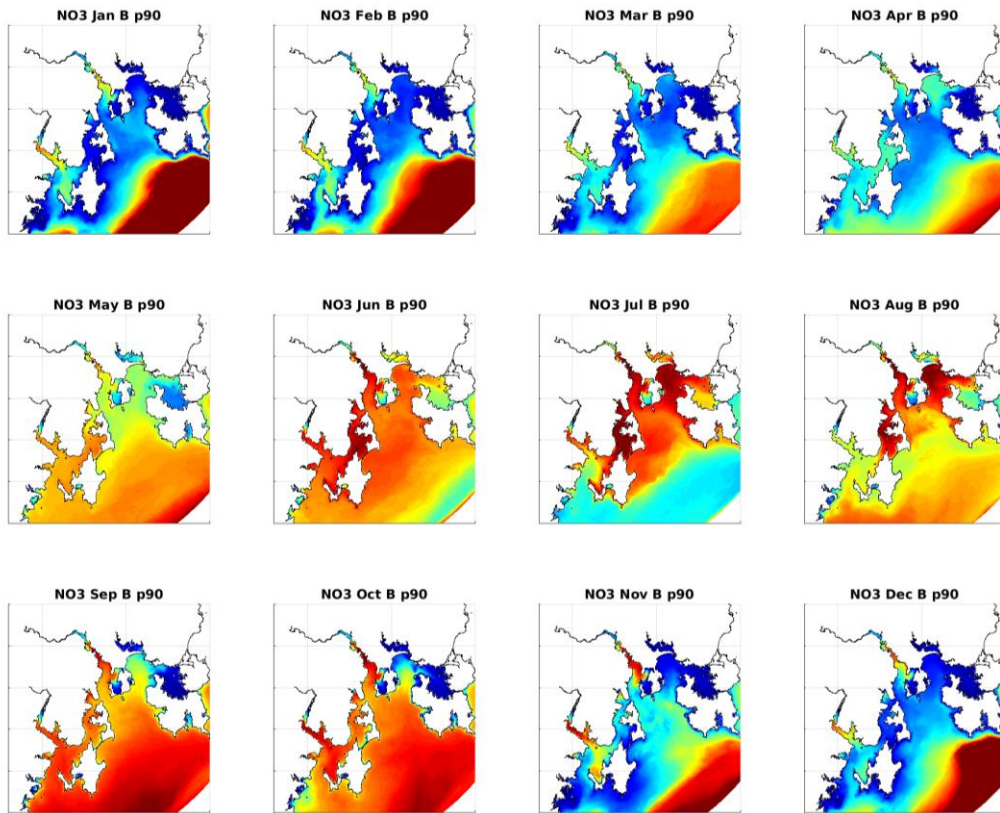




NO3 mg/m3

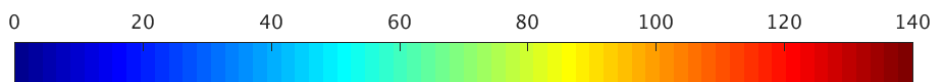
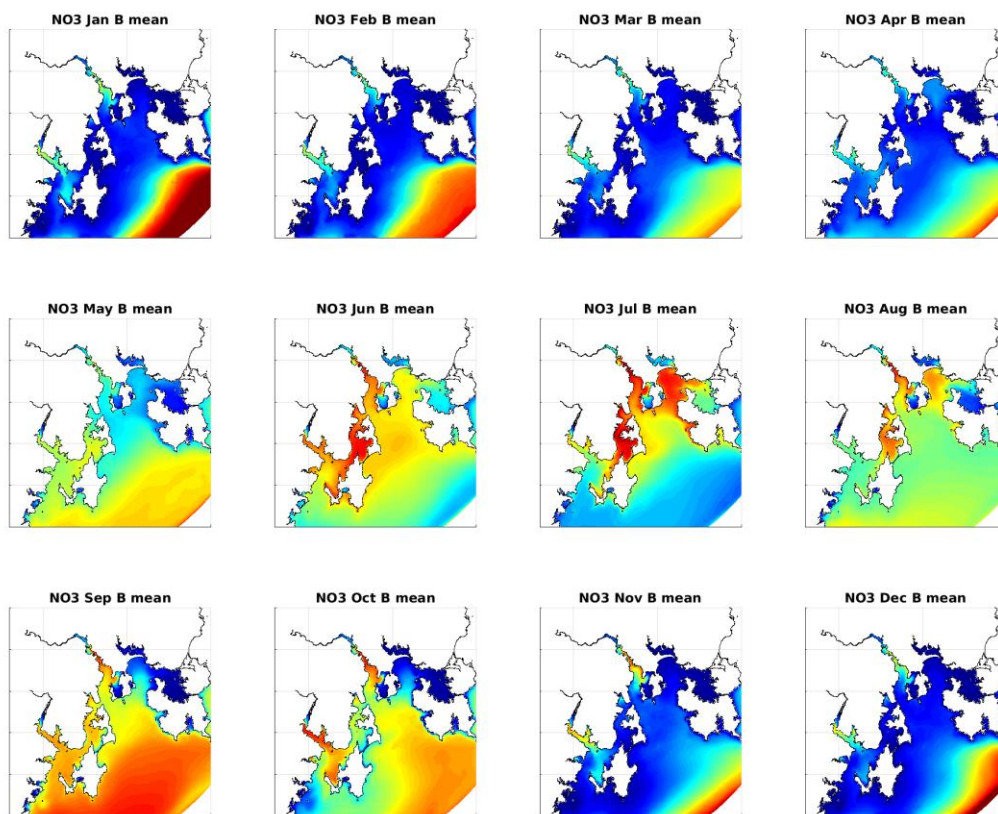
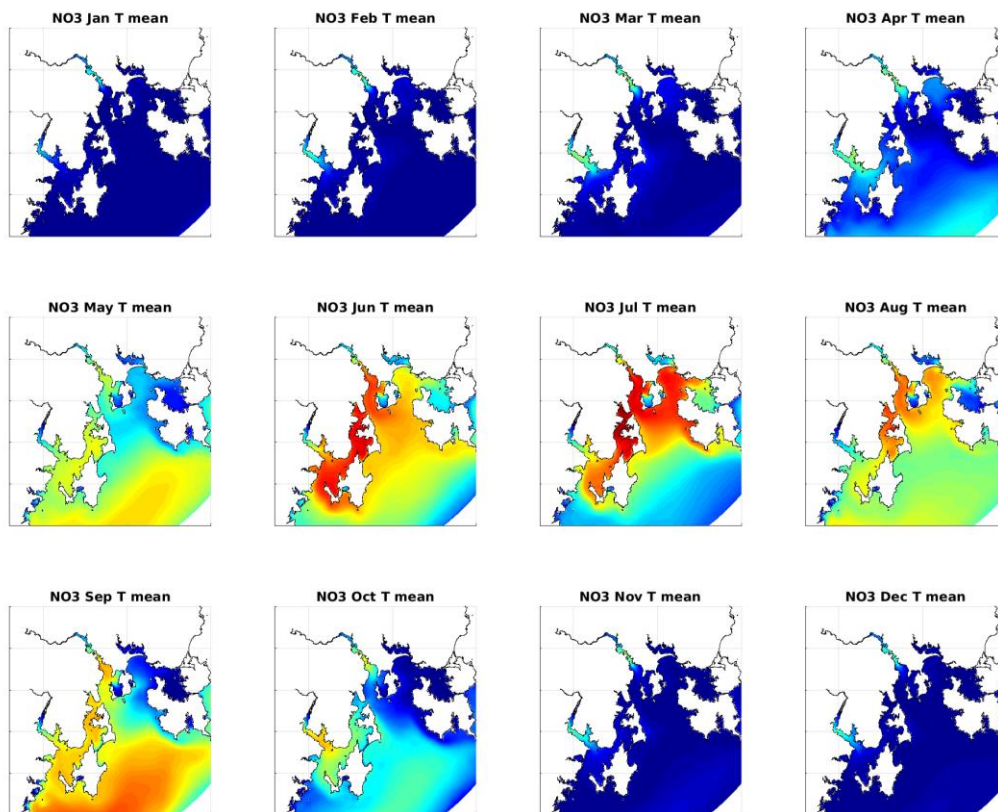


NO3 mg/m3

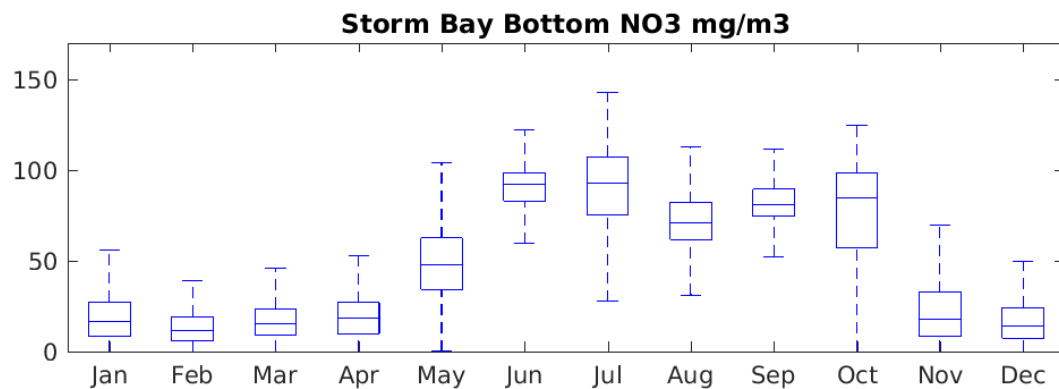
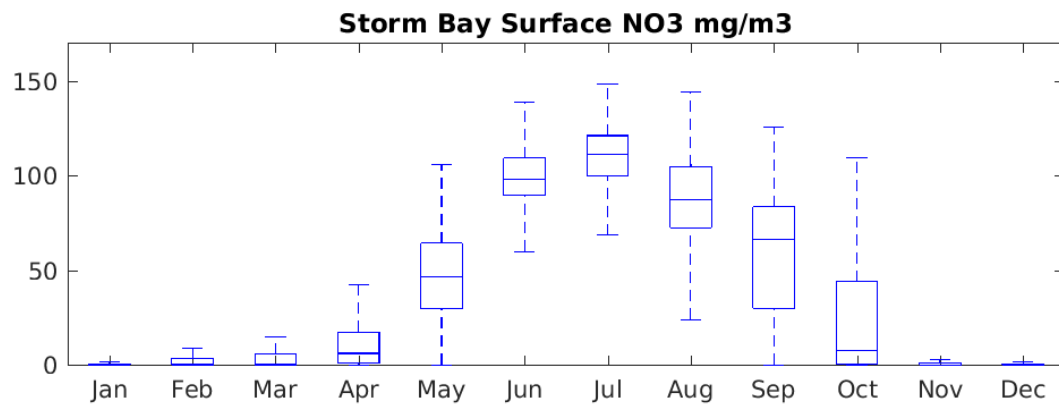
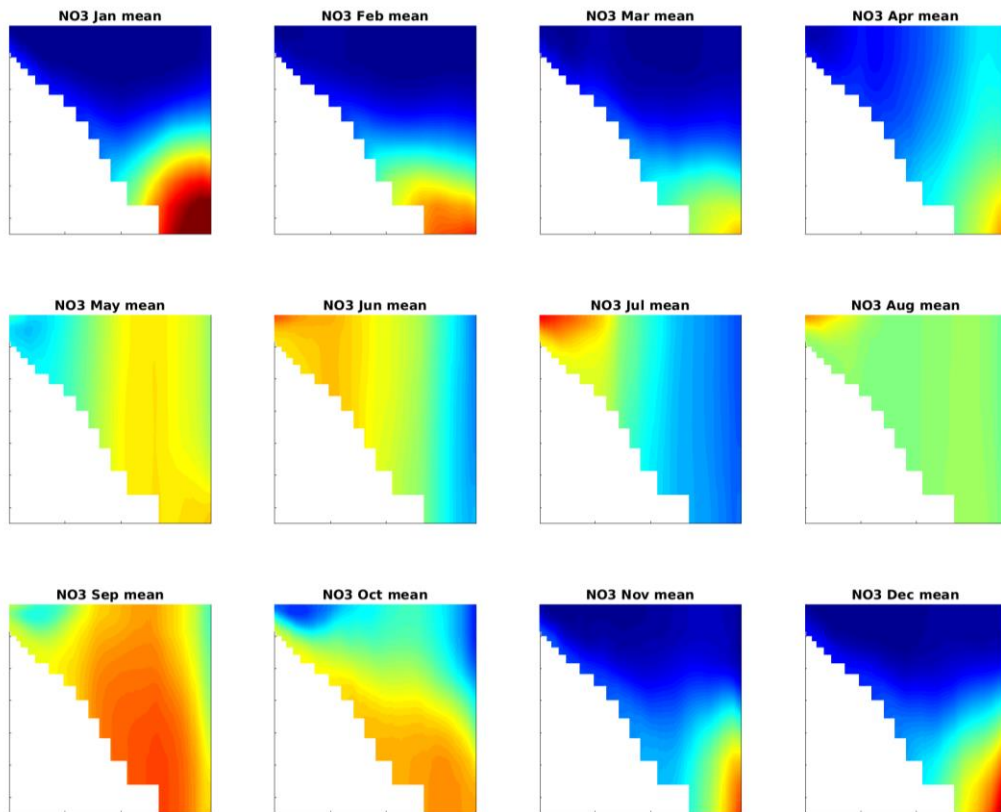


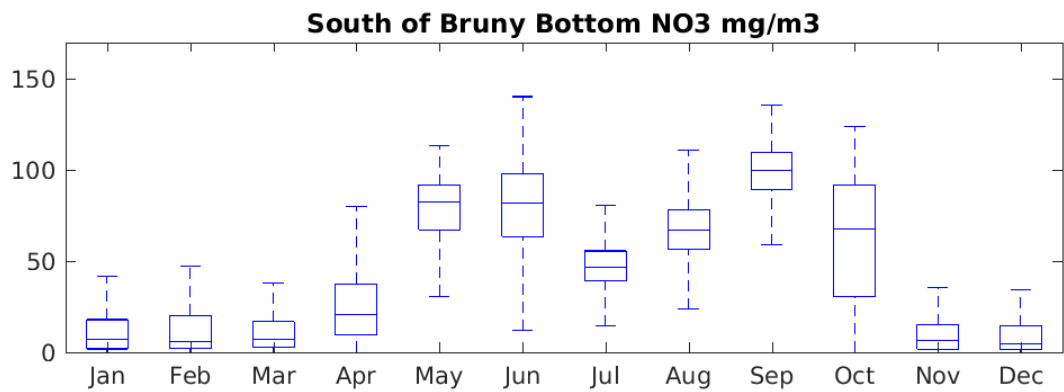
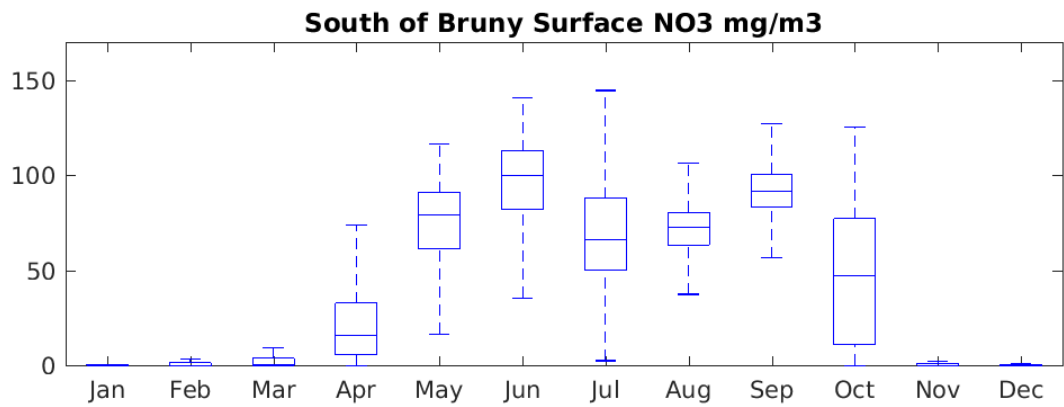
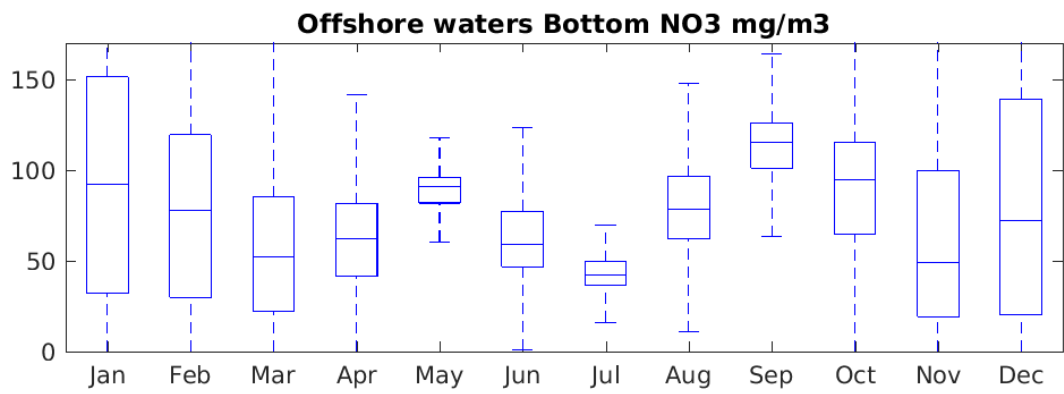
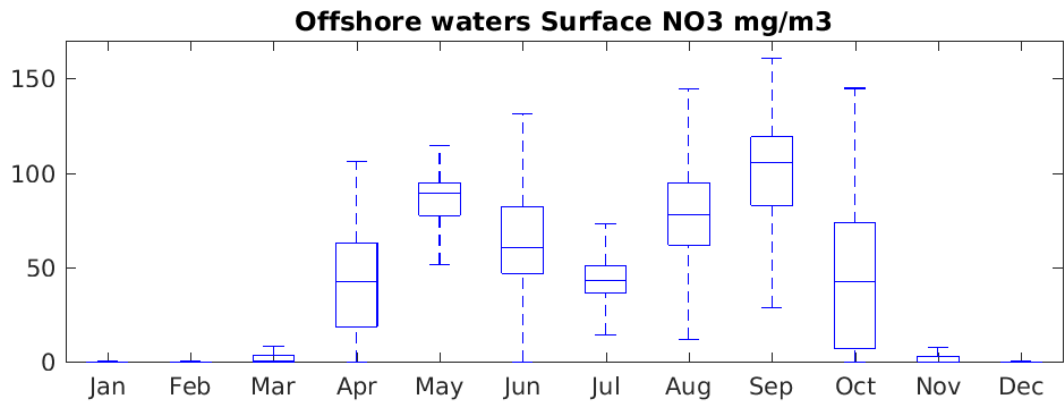
NO3 mg/m3



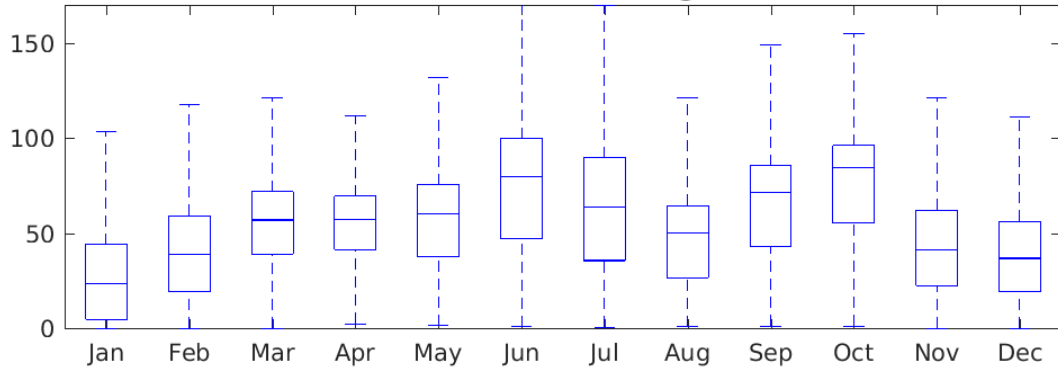


NO3 mg/m3

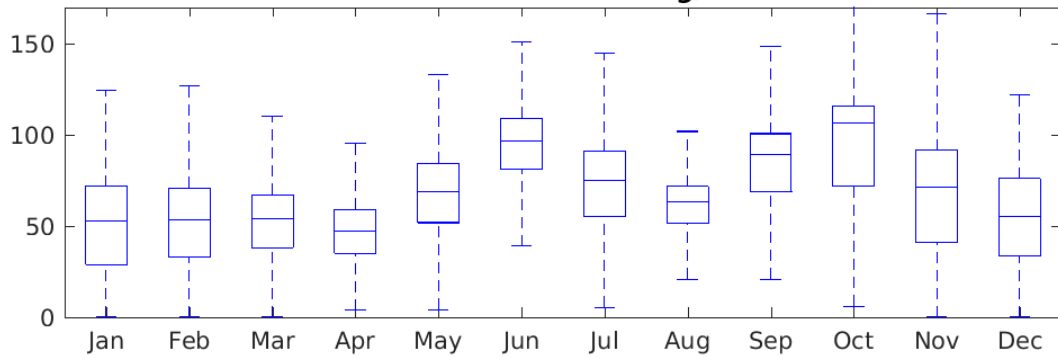




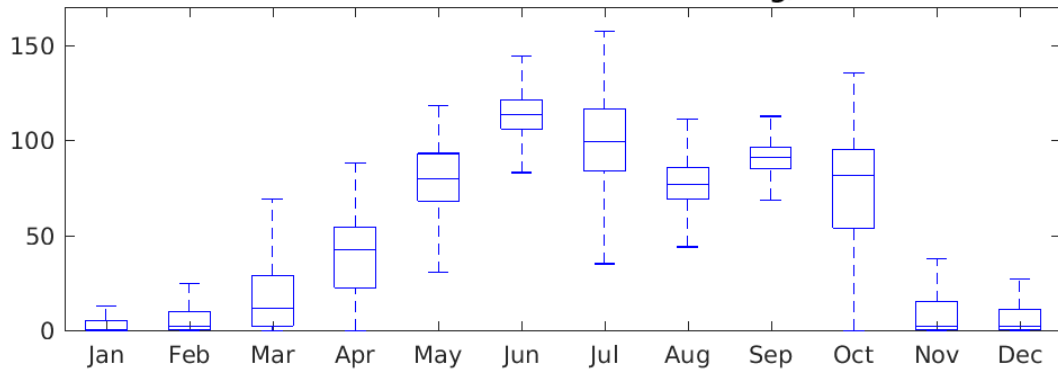
**Huon Surface NO3 mg/m3**



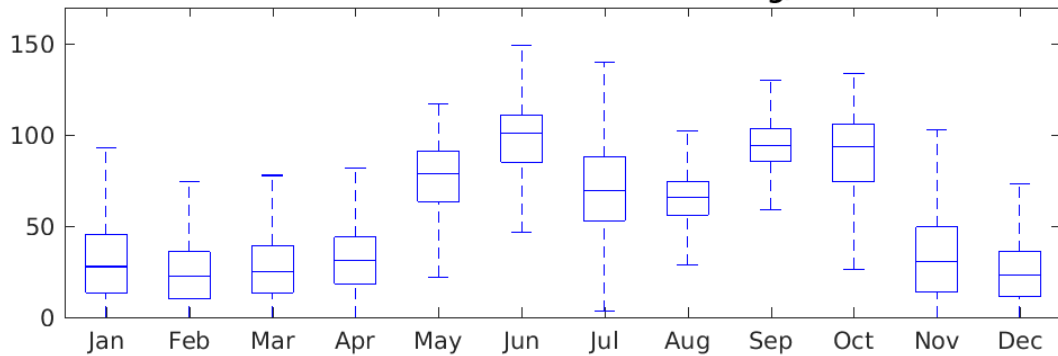
**Huon Bottom NO3 mg/m3**

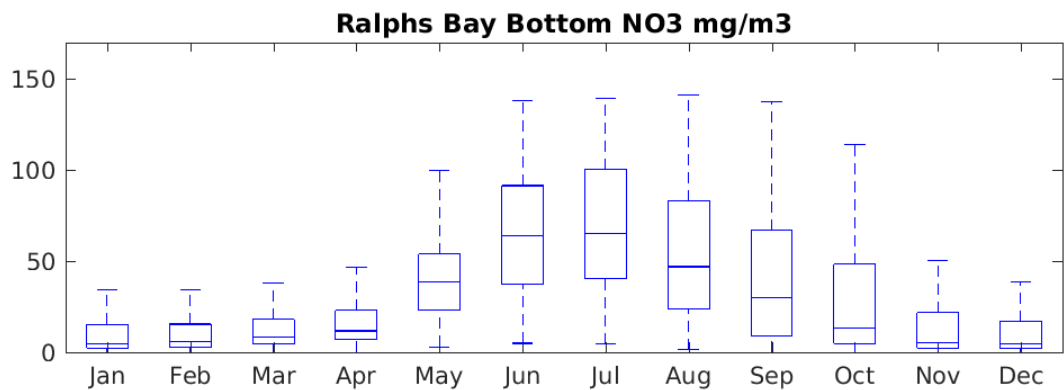
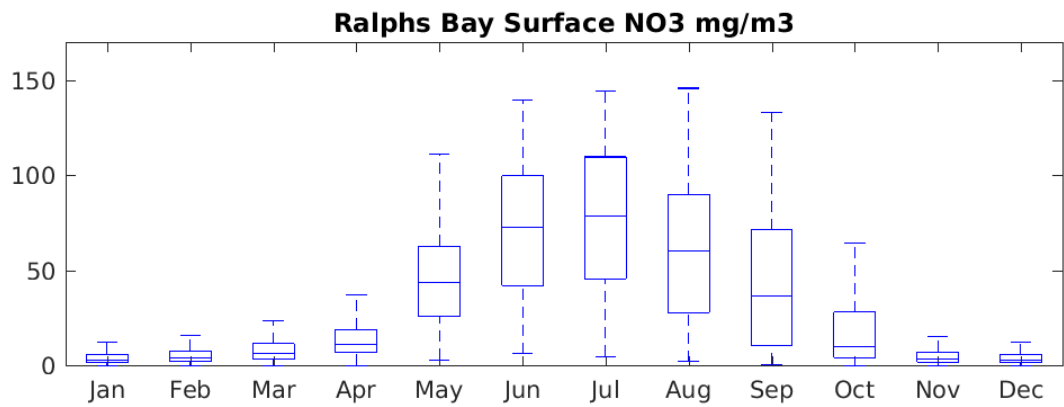
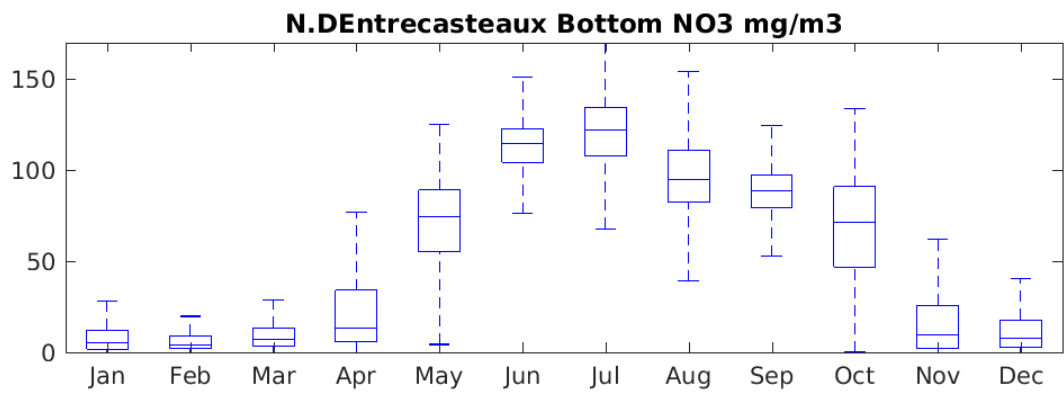
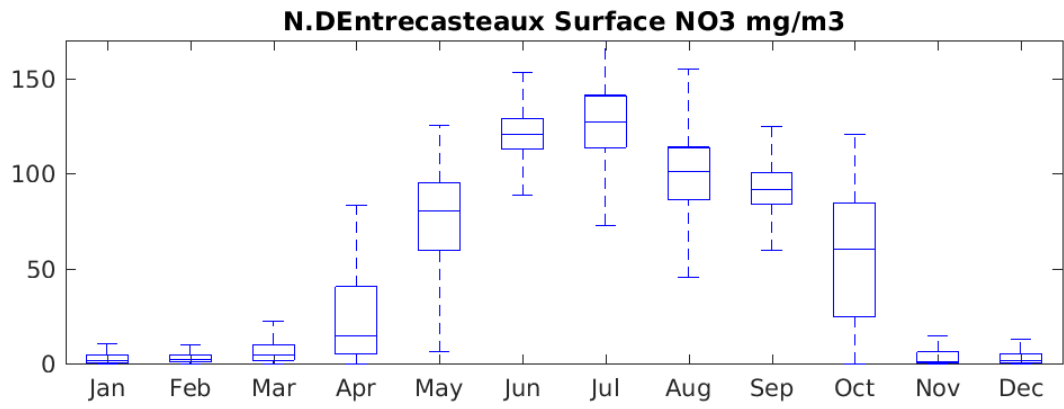


**S.DEntrecasteaux Surface NO3 mg/m3**

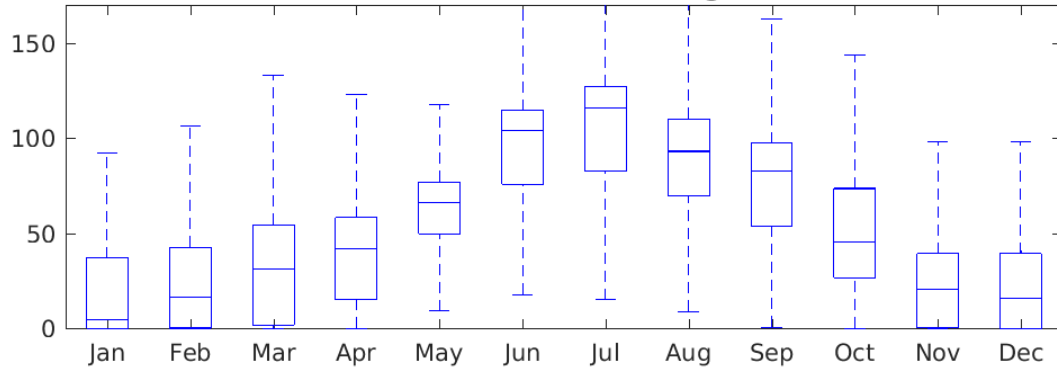


**S.DEntrecasteaux Bottom NO3 mg/m3**

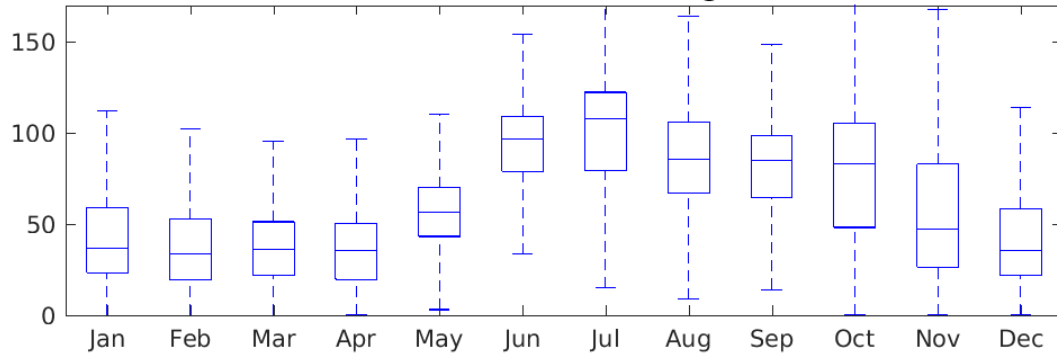




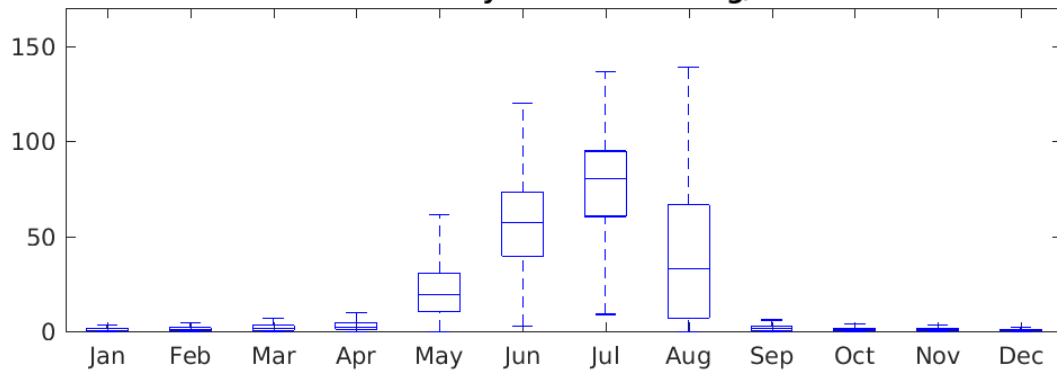
**Derwent Surface NO3 mg/m3**



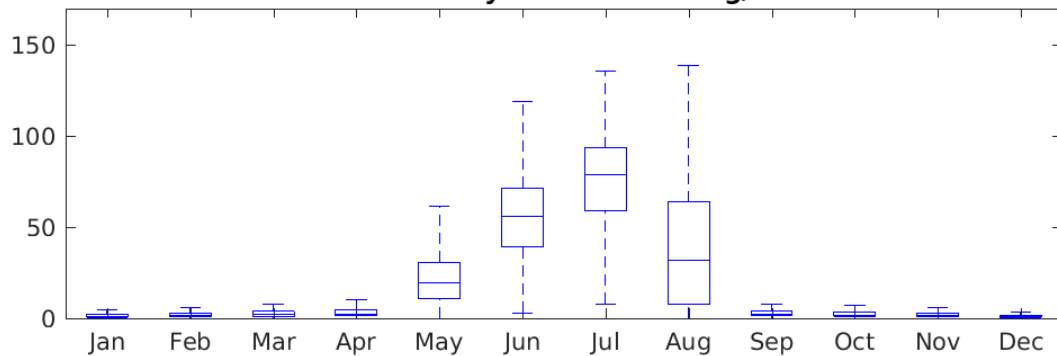
**Derwent Bottom NO3 mg/m3**

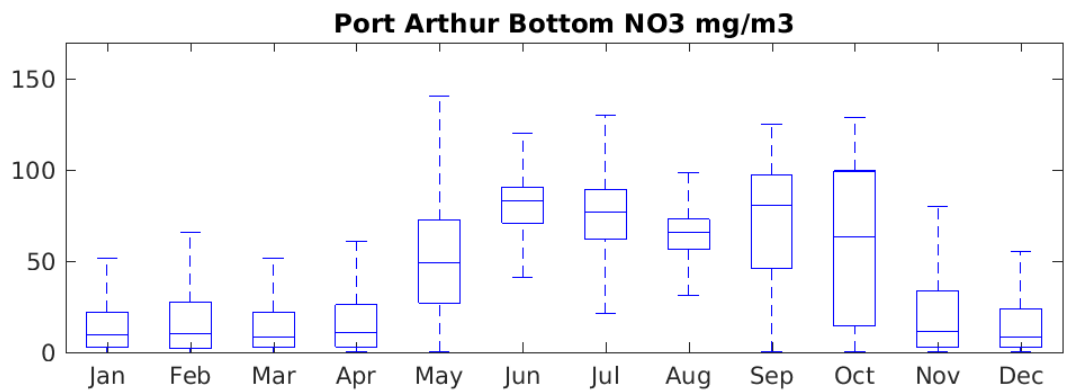
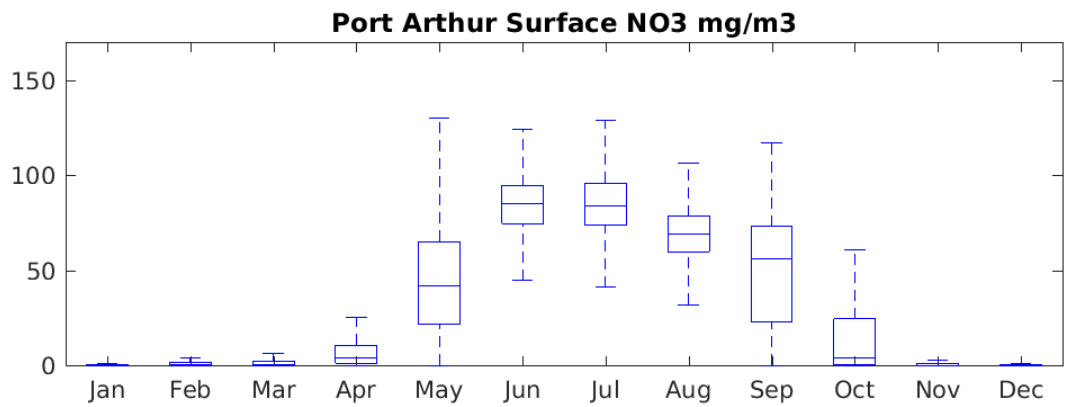
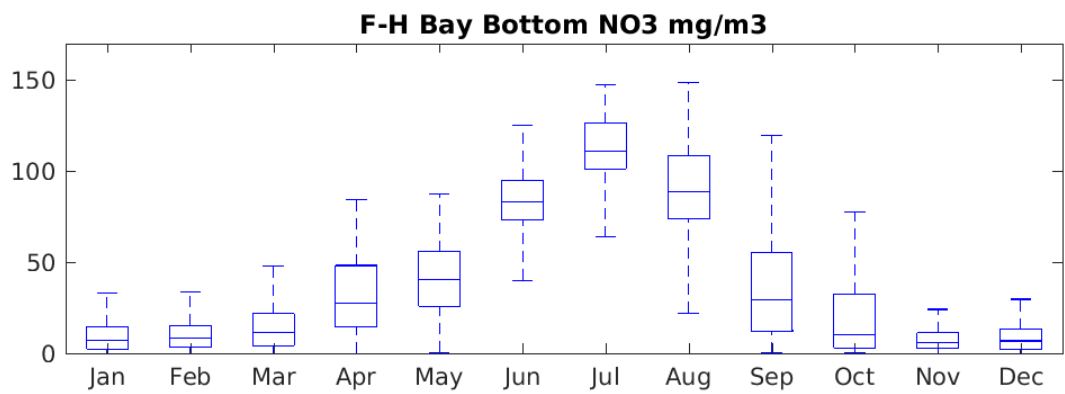
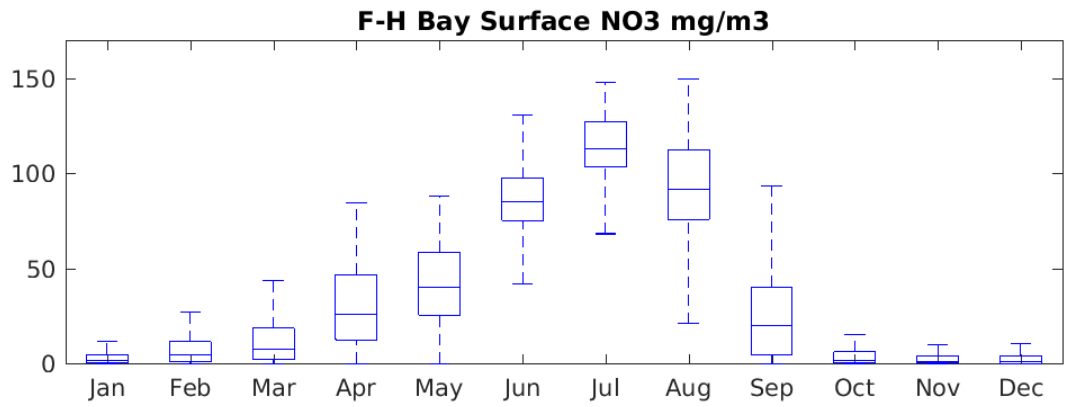


**Norfolk Bay Surface NO3 mg/m3**

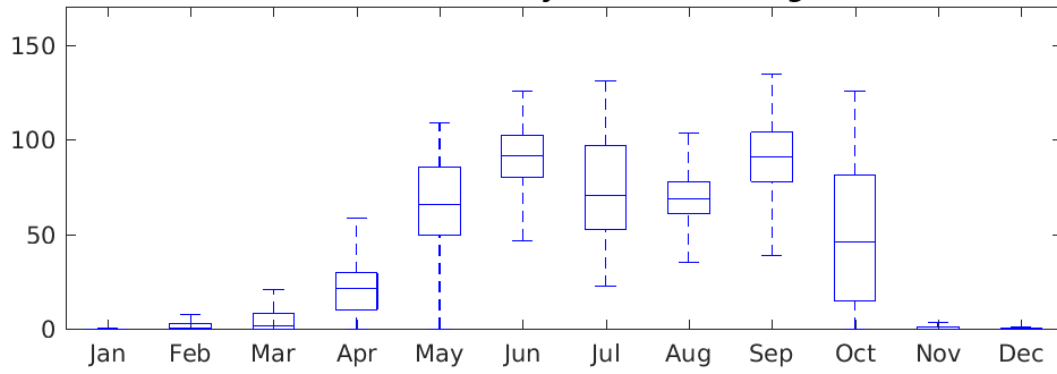


**Norfolk Bay Bottom NO3 mg/m3**

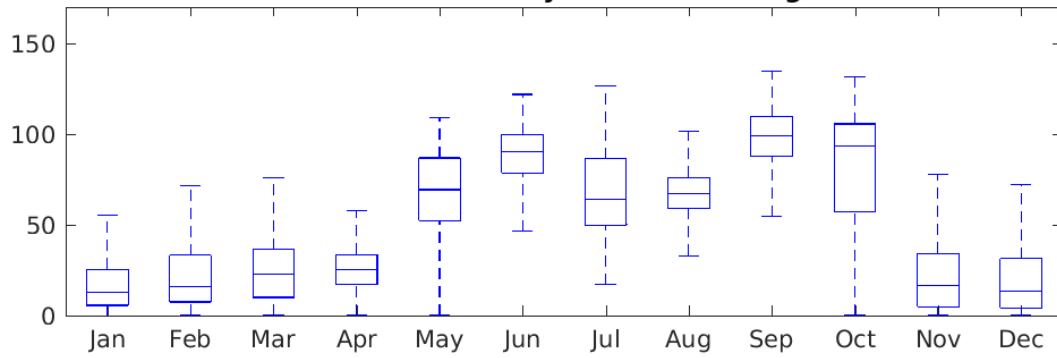




**Offshore Storm Bay Surface NO3 mg/m3**

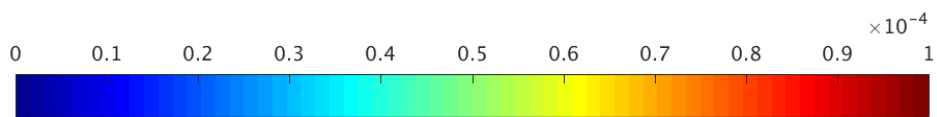
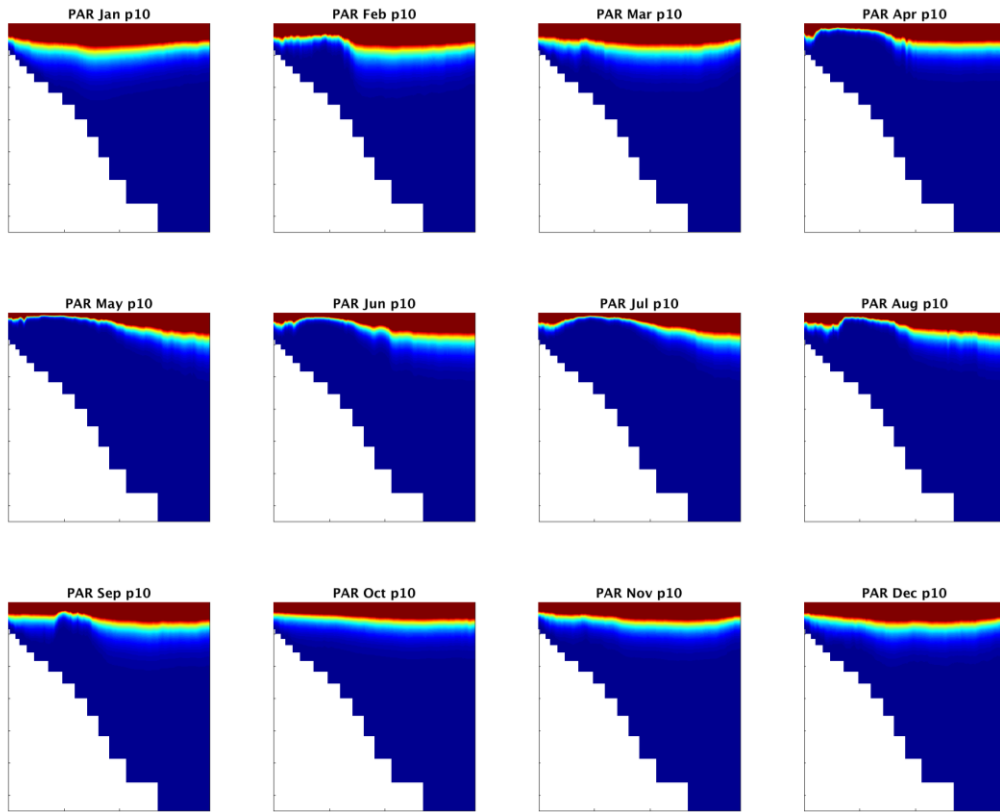


**Offshore Storm Bay Bottom NO3 mg/m3**

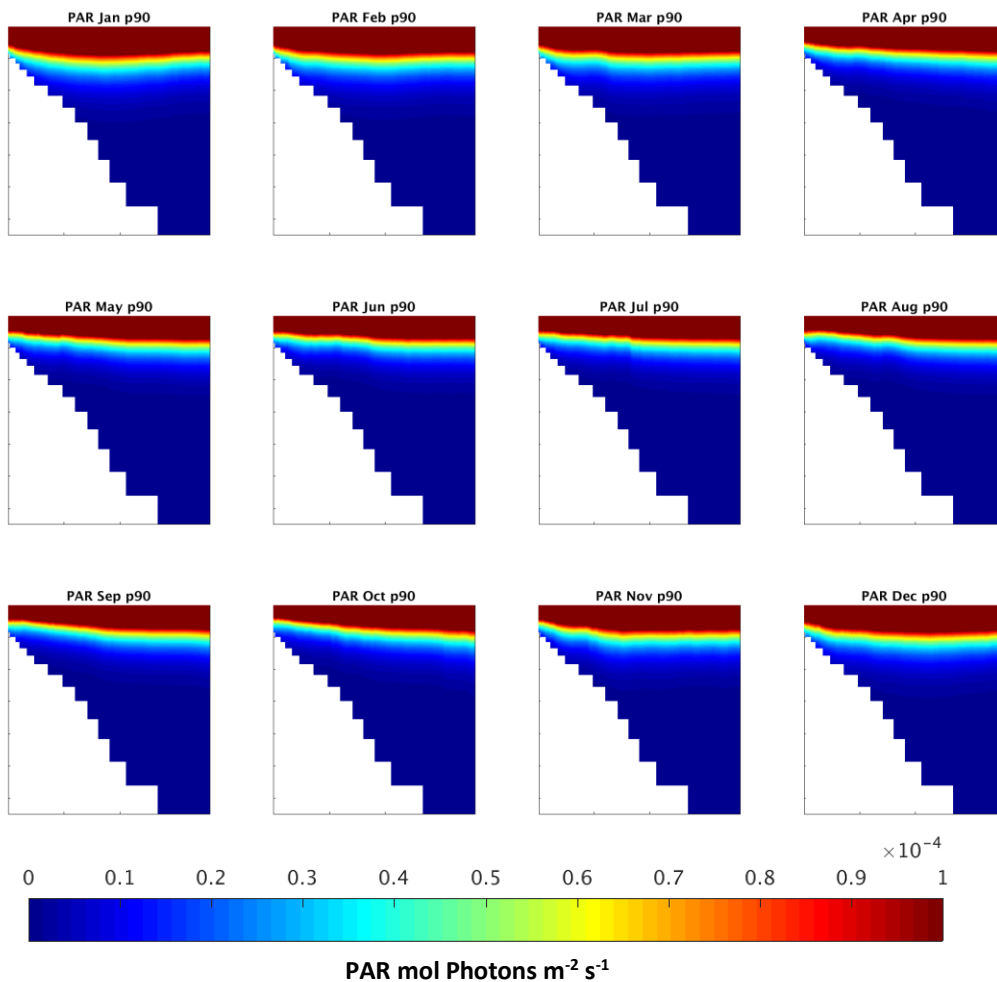
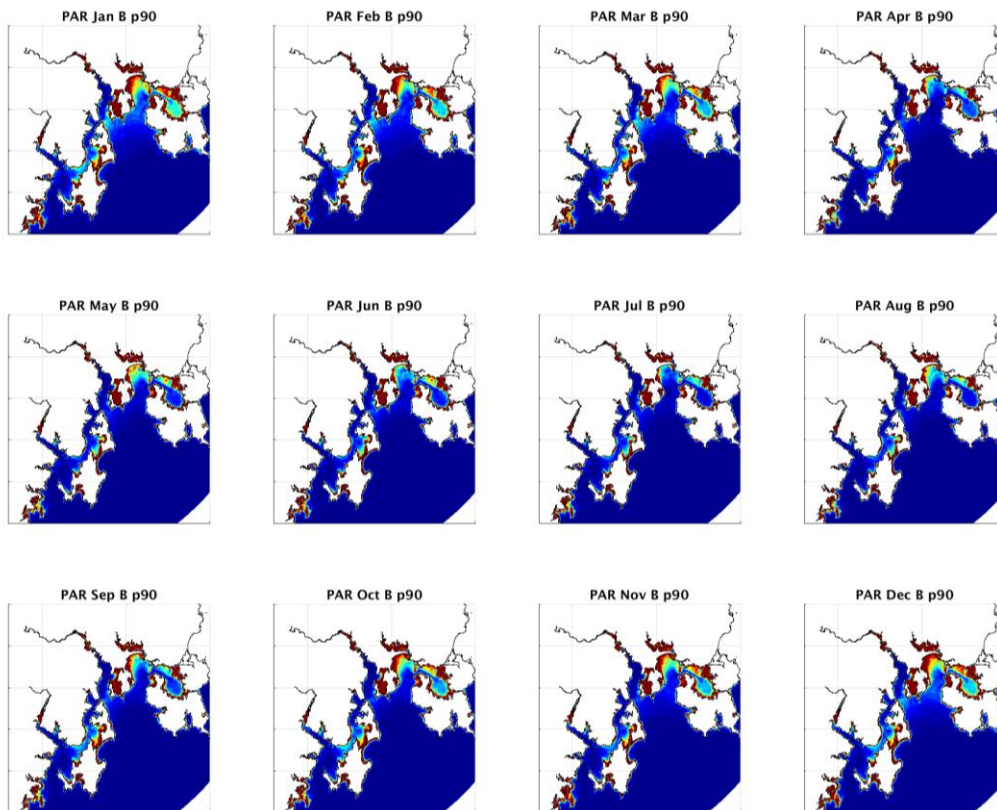


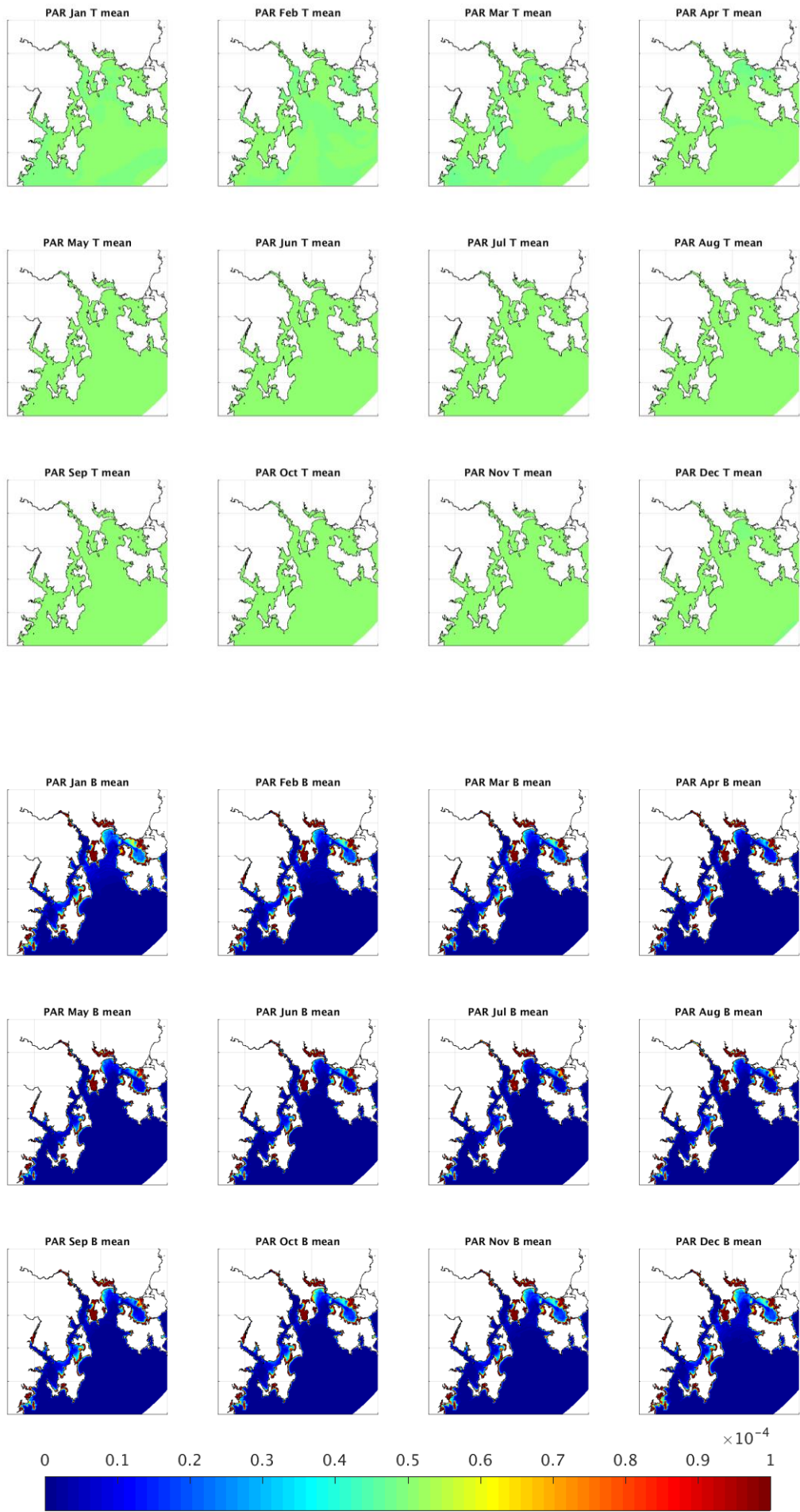


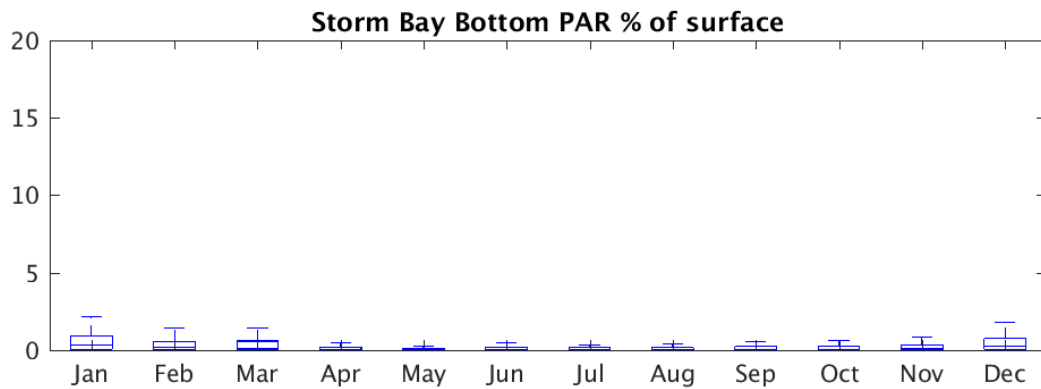
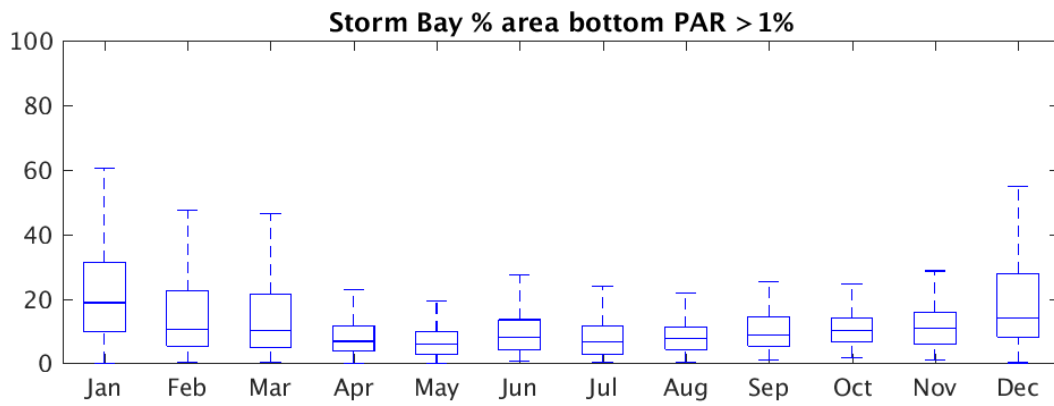
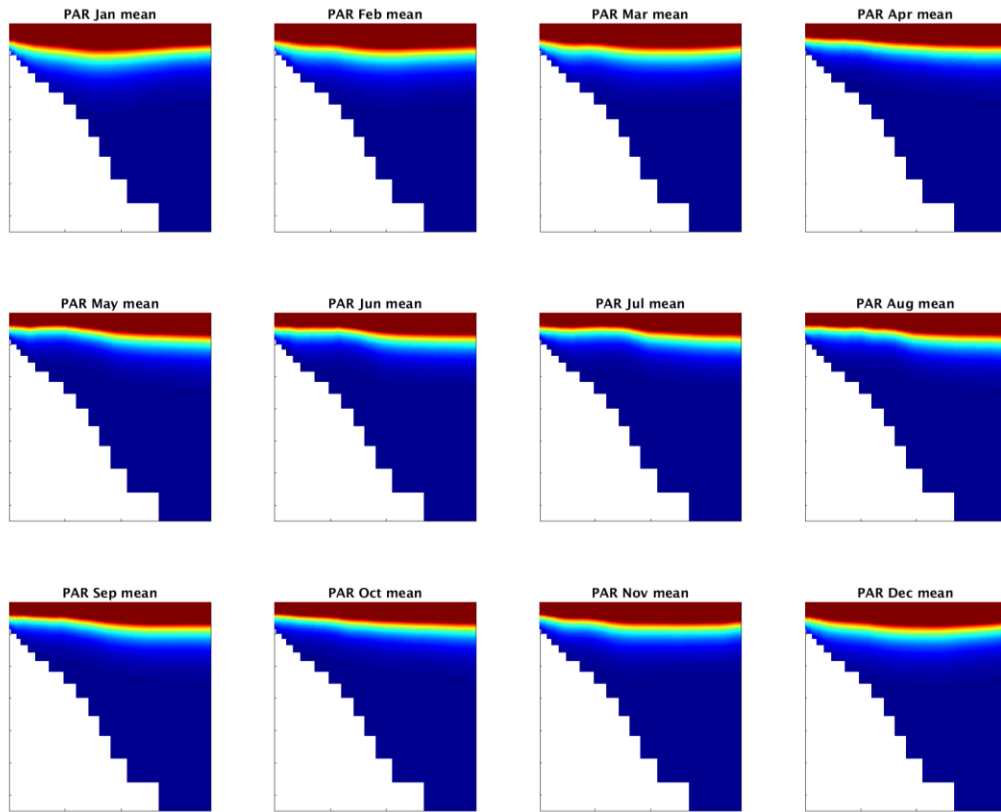


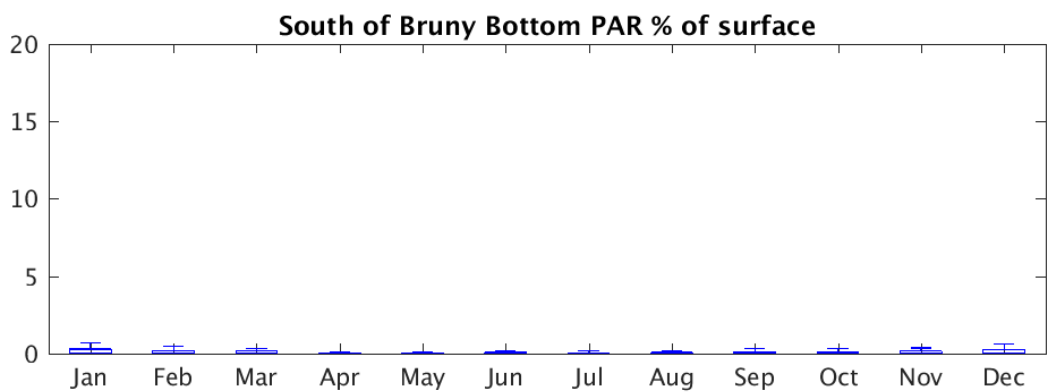
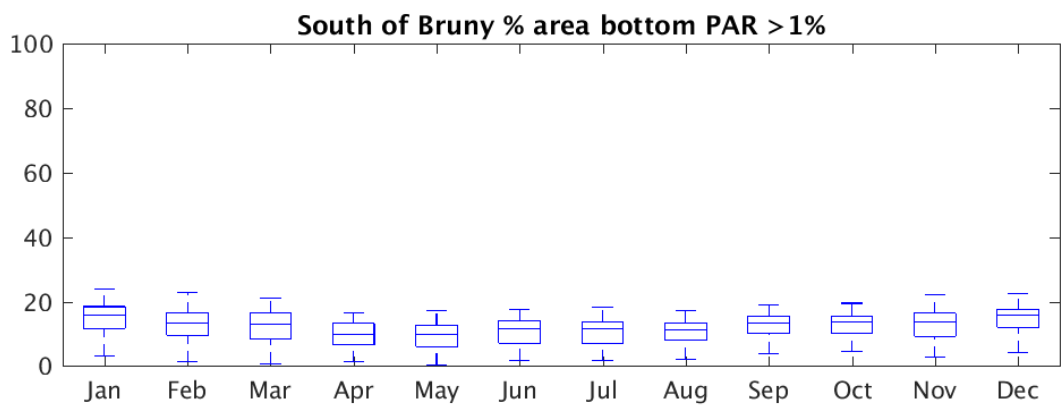
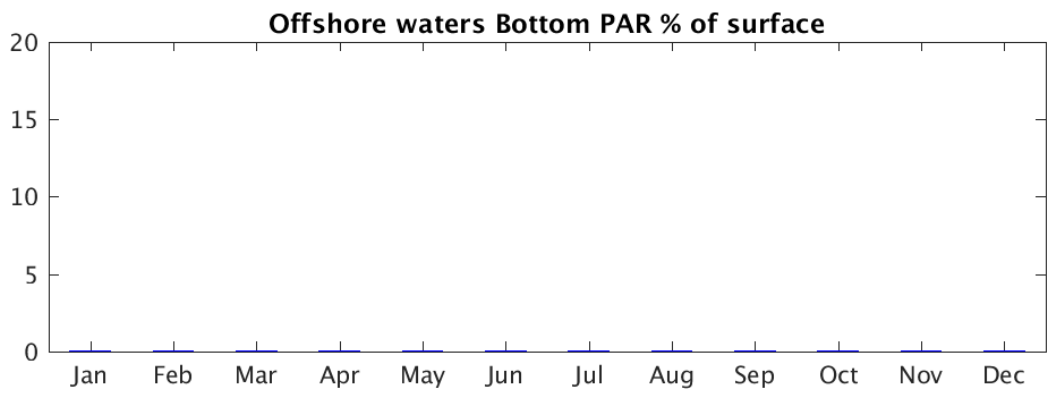
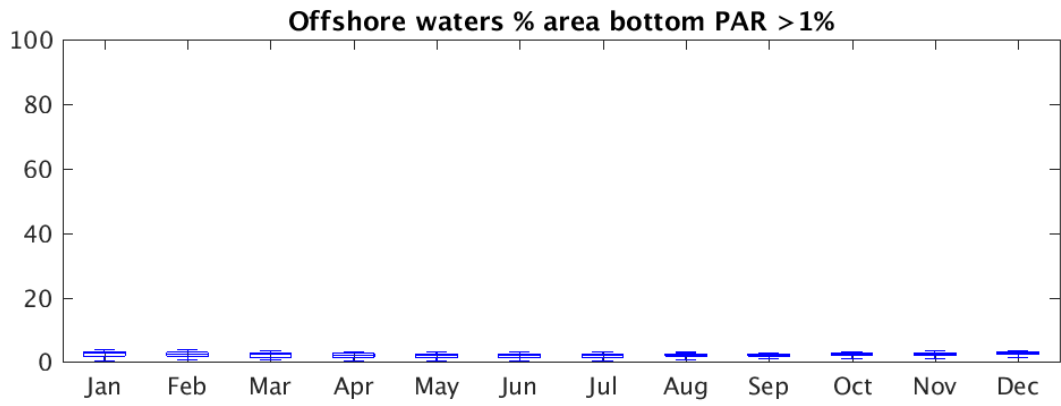


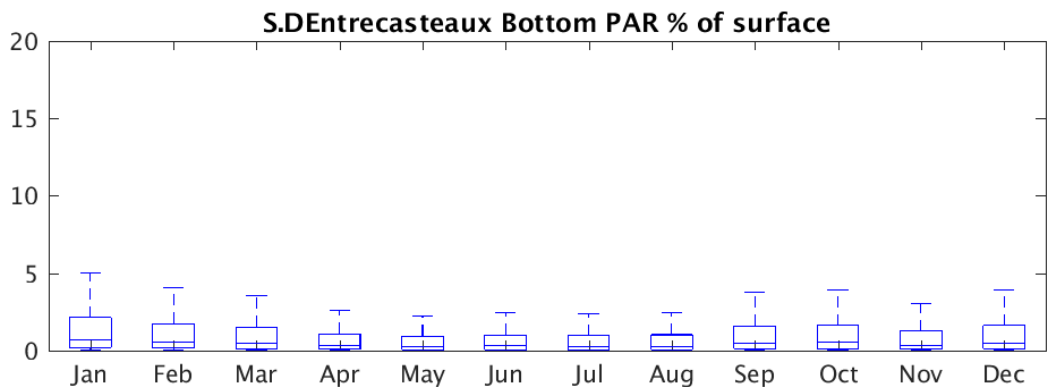
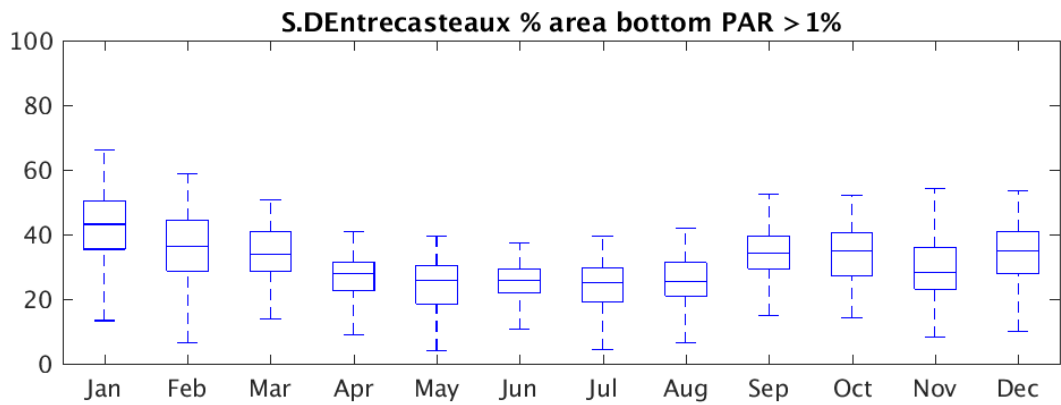
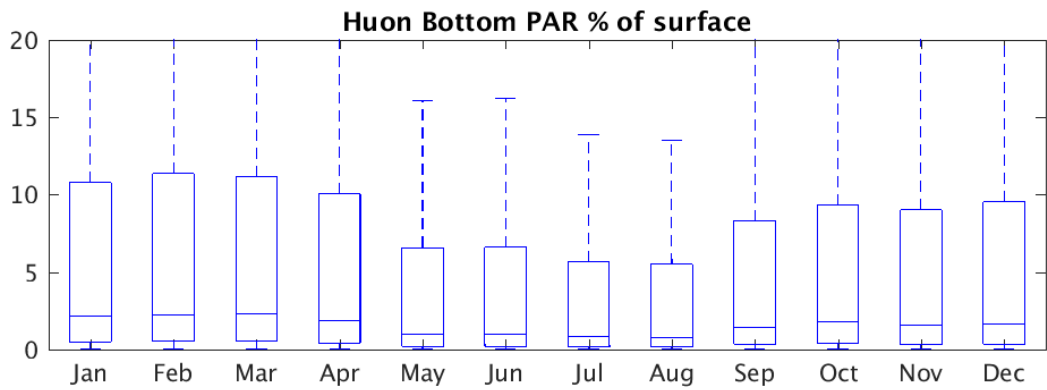
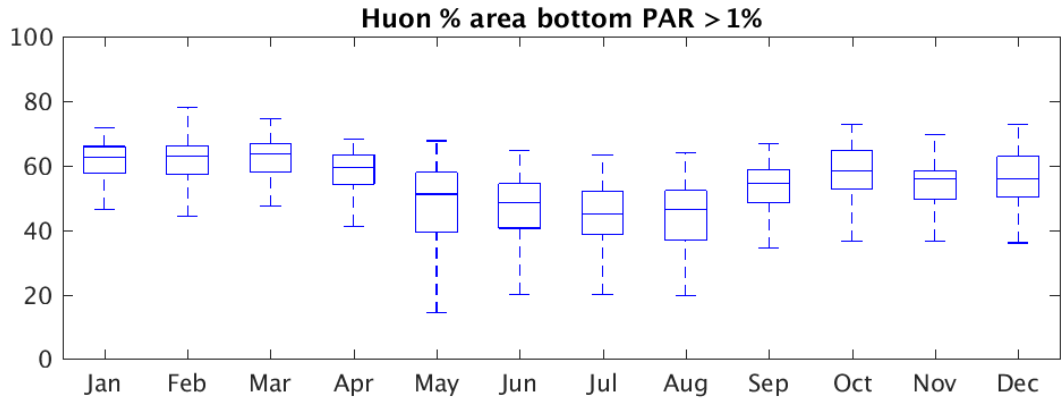
PAR mol Photons  $m^{-2} s^{-1}$

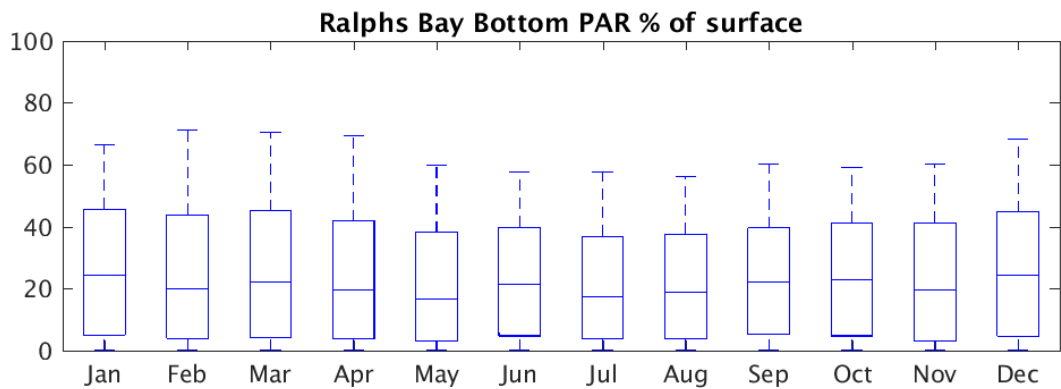
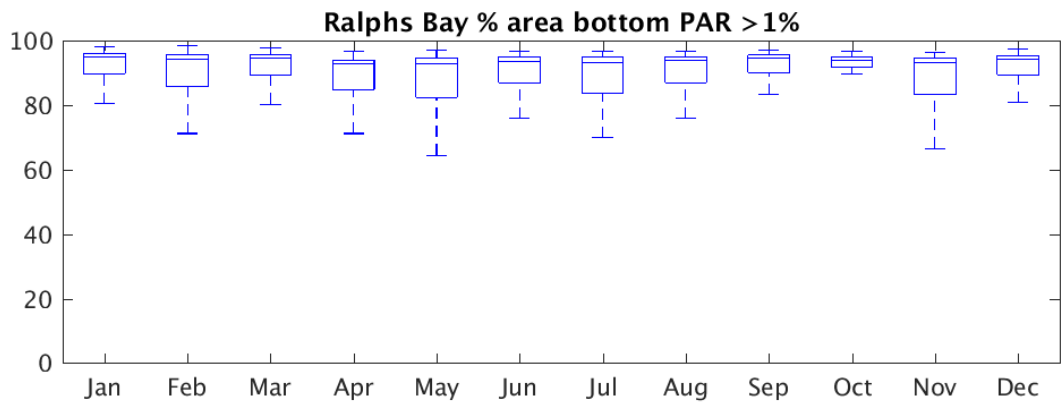
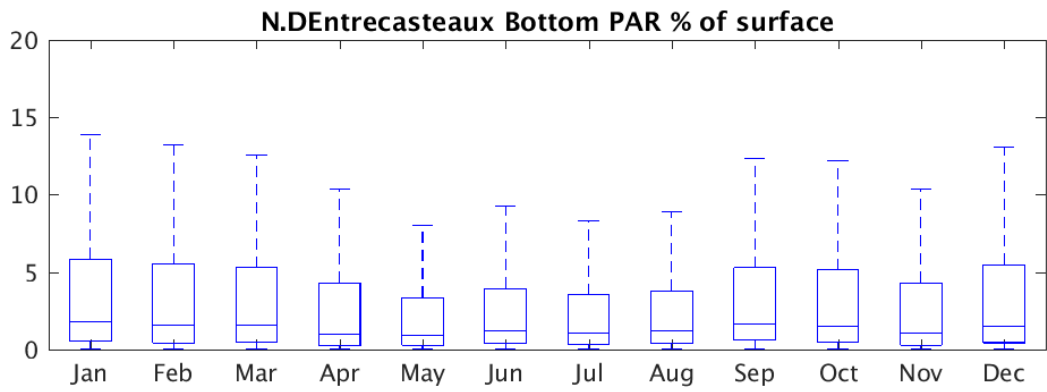
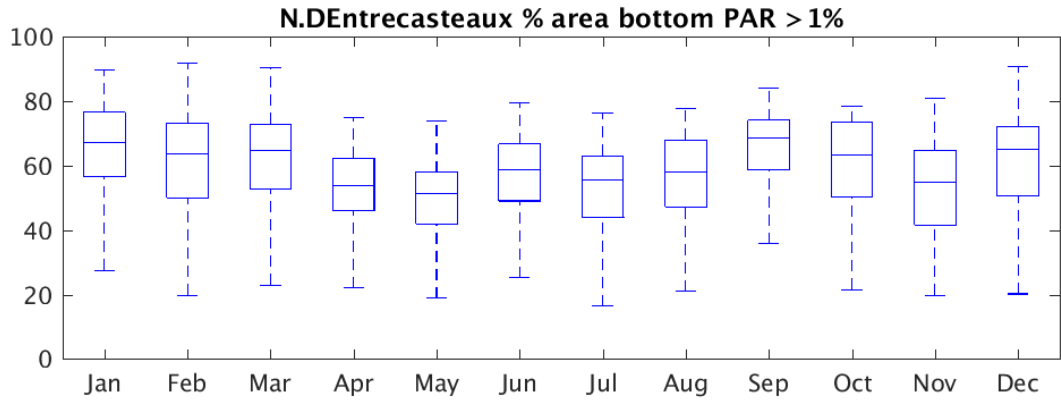




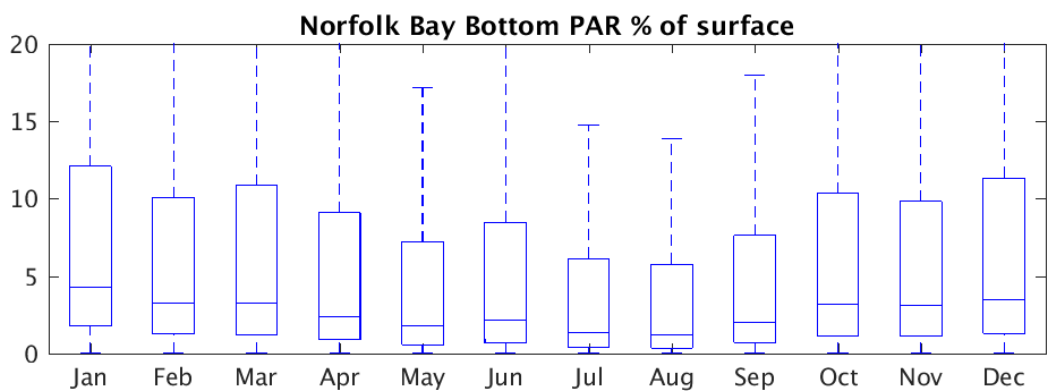
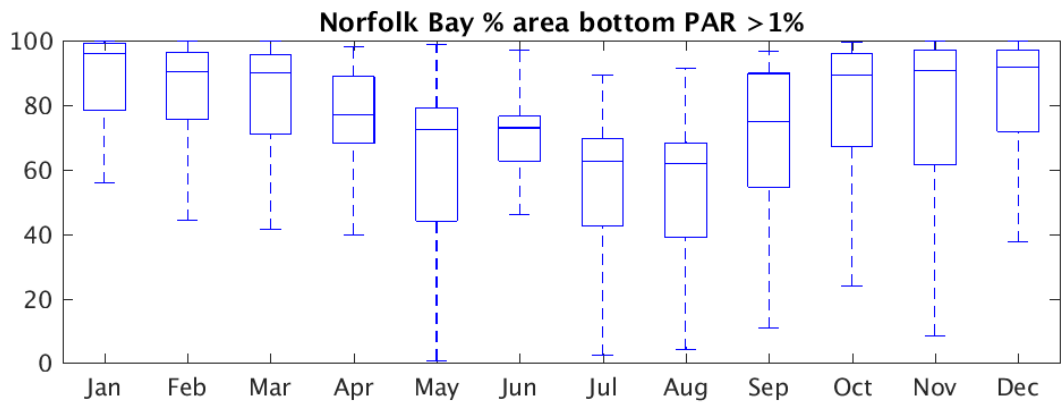
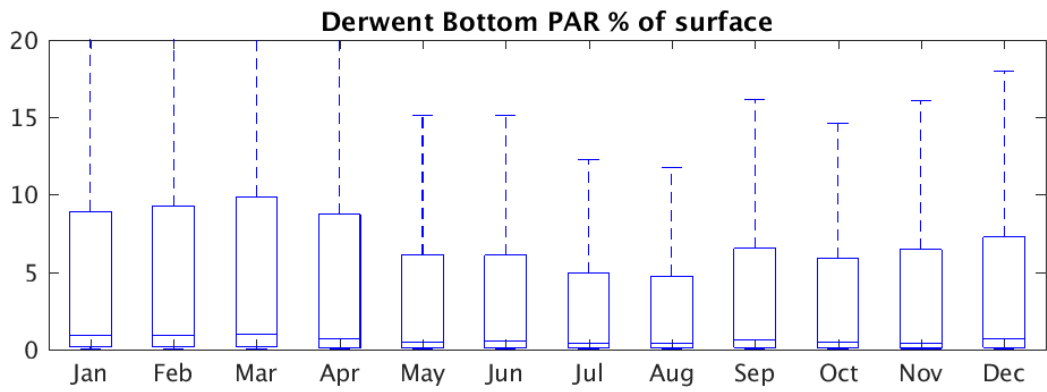
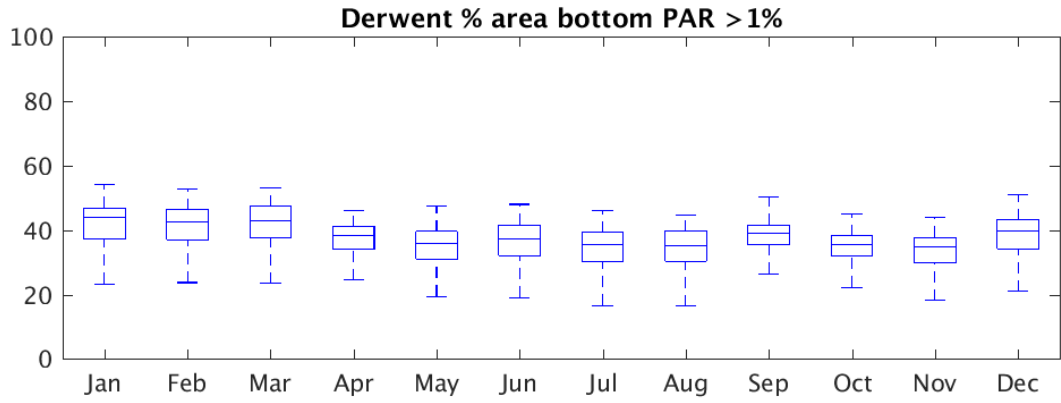


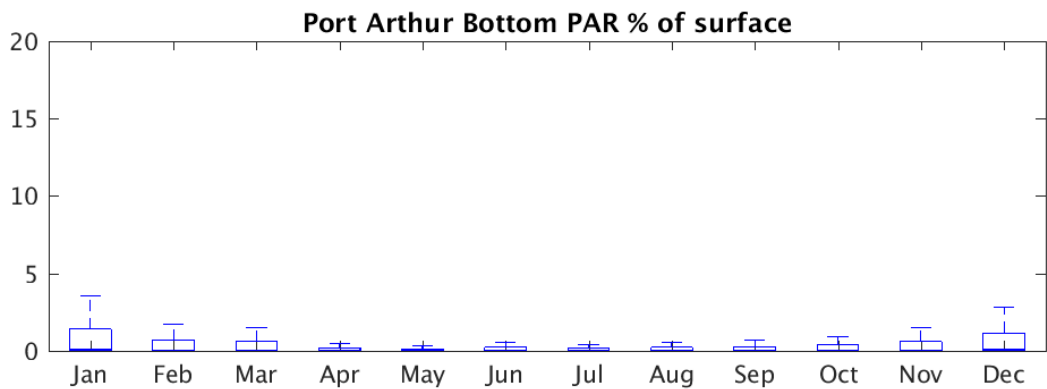
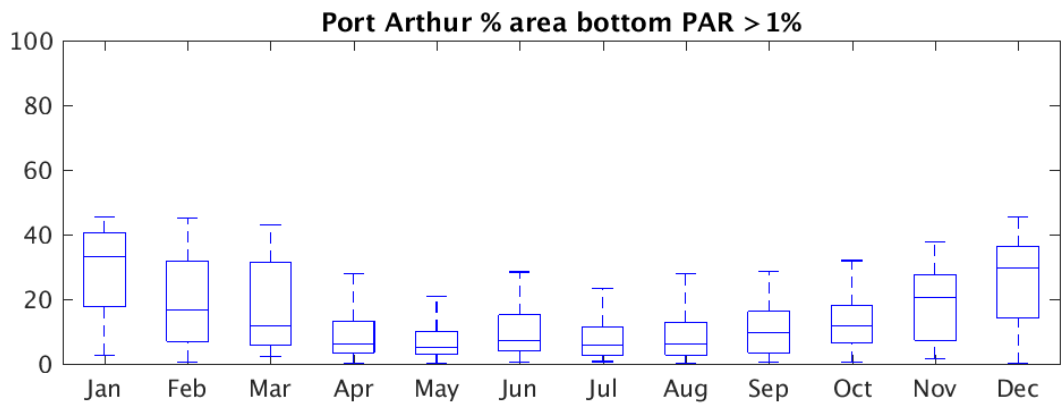
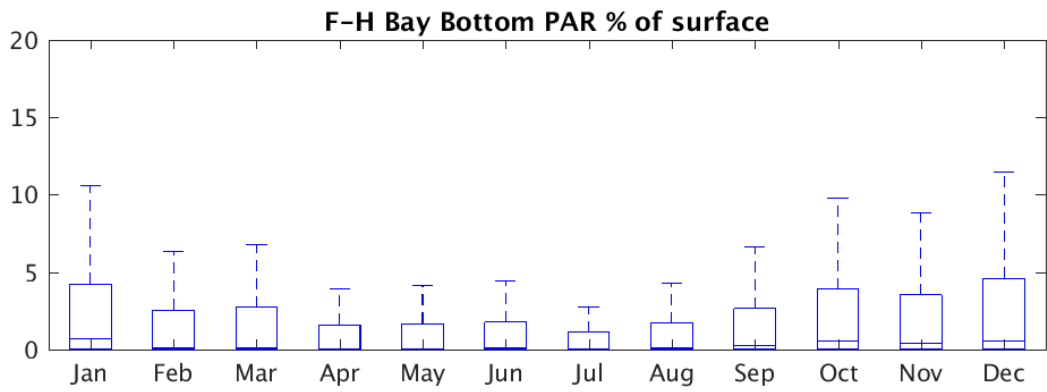
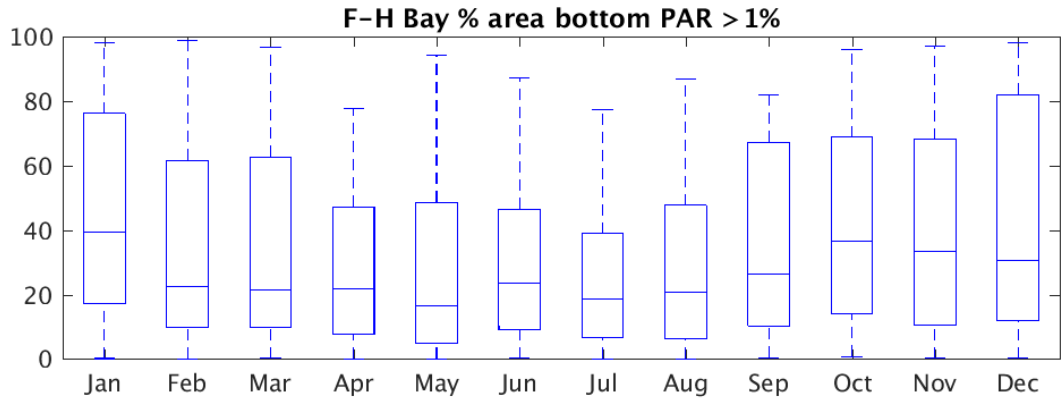


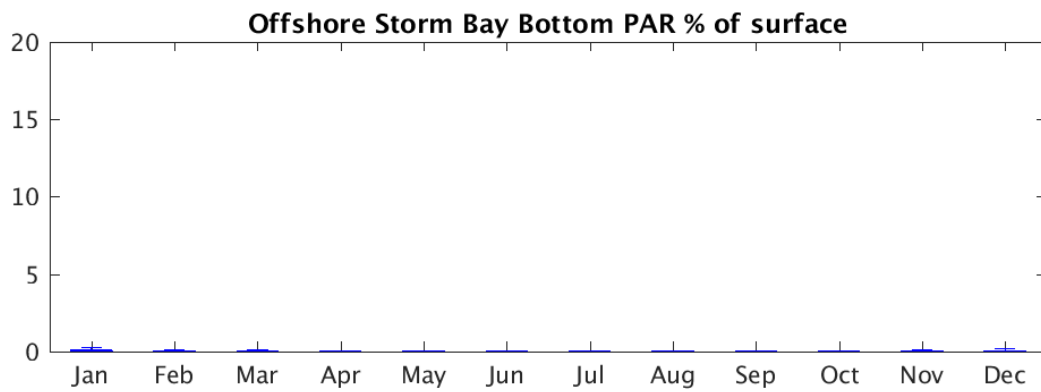
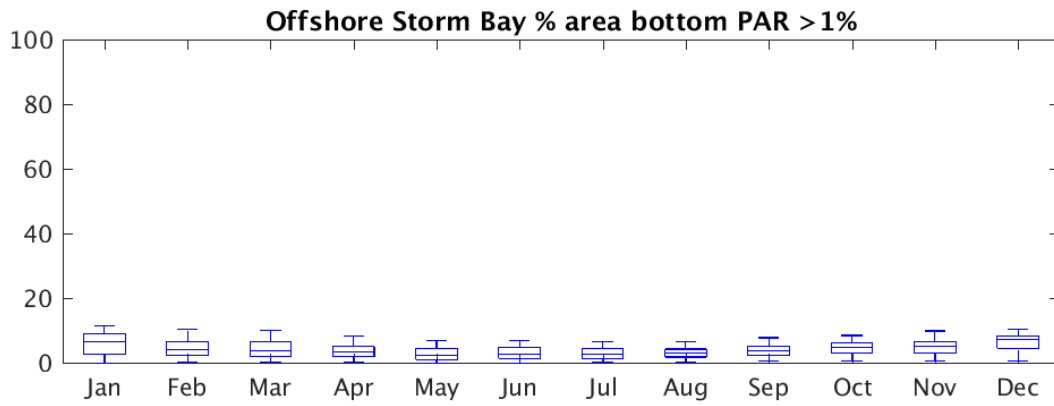


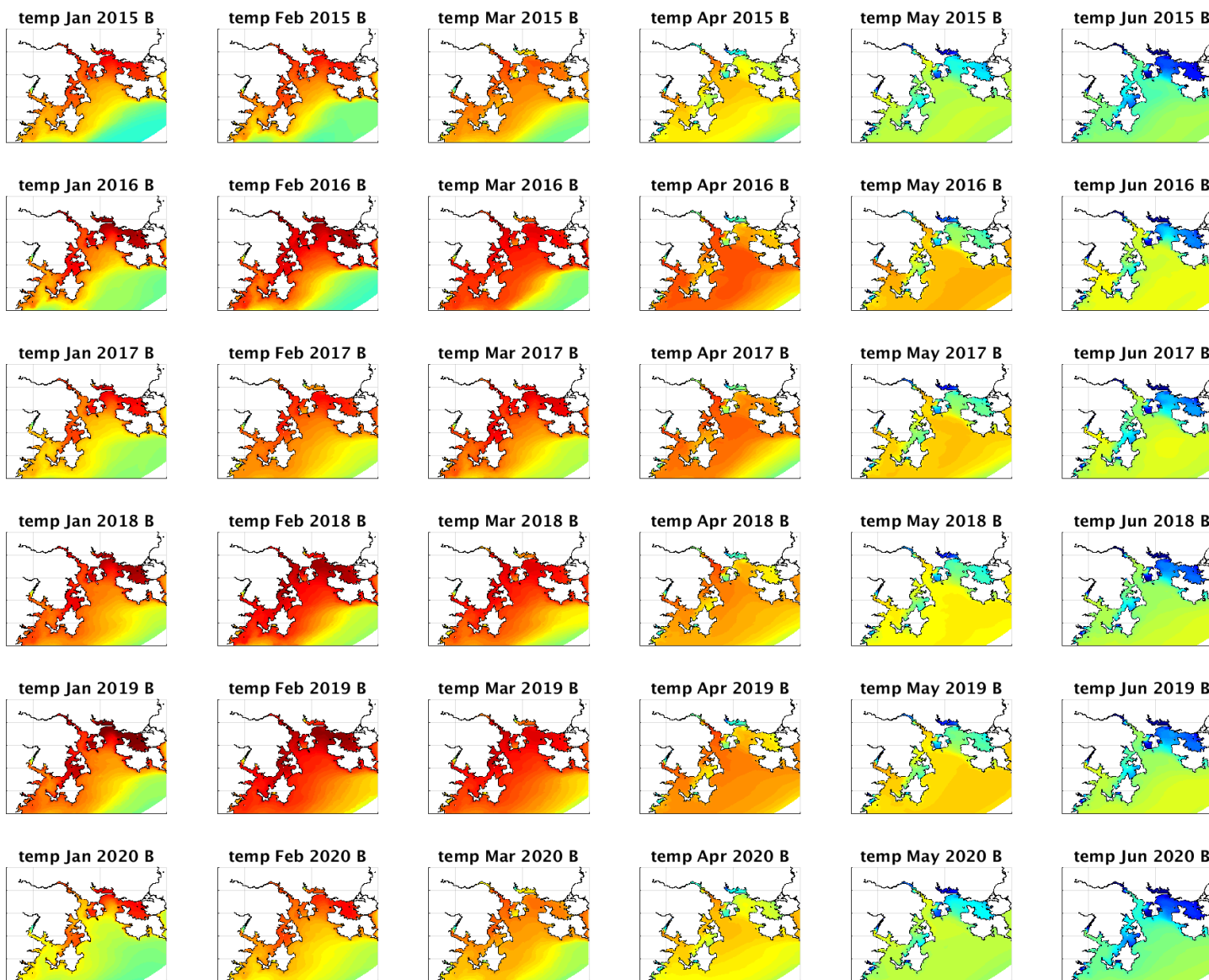


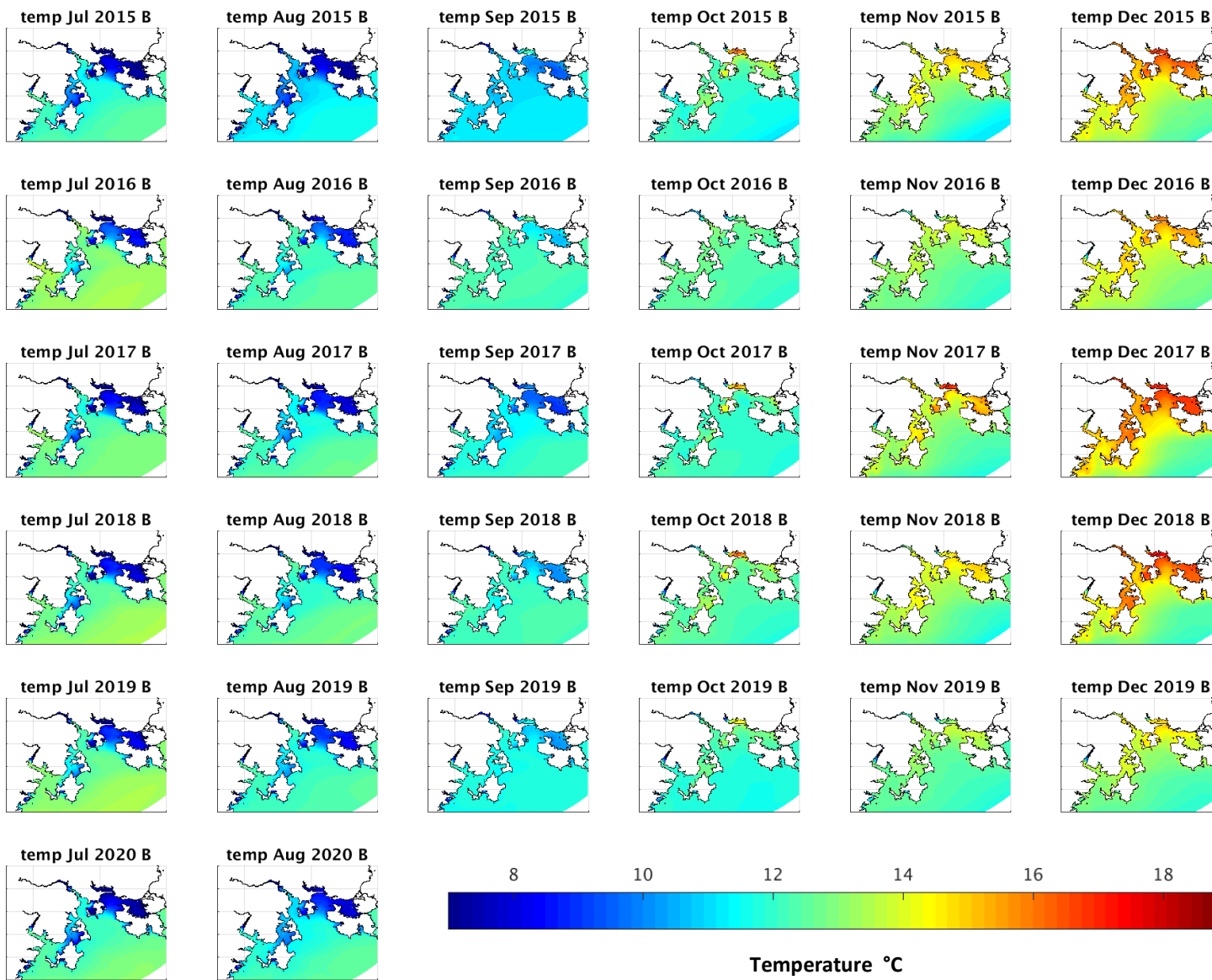


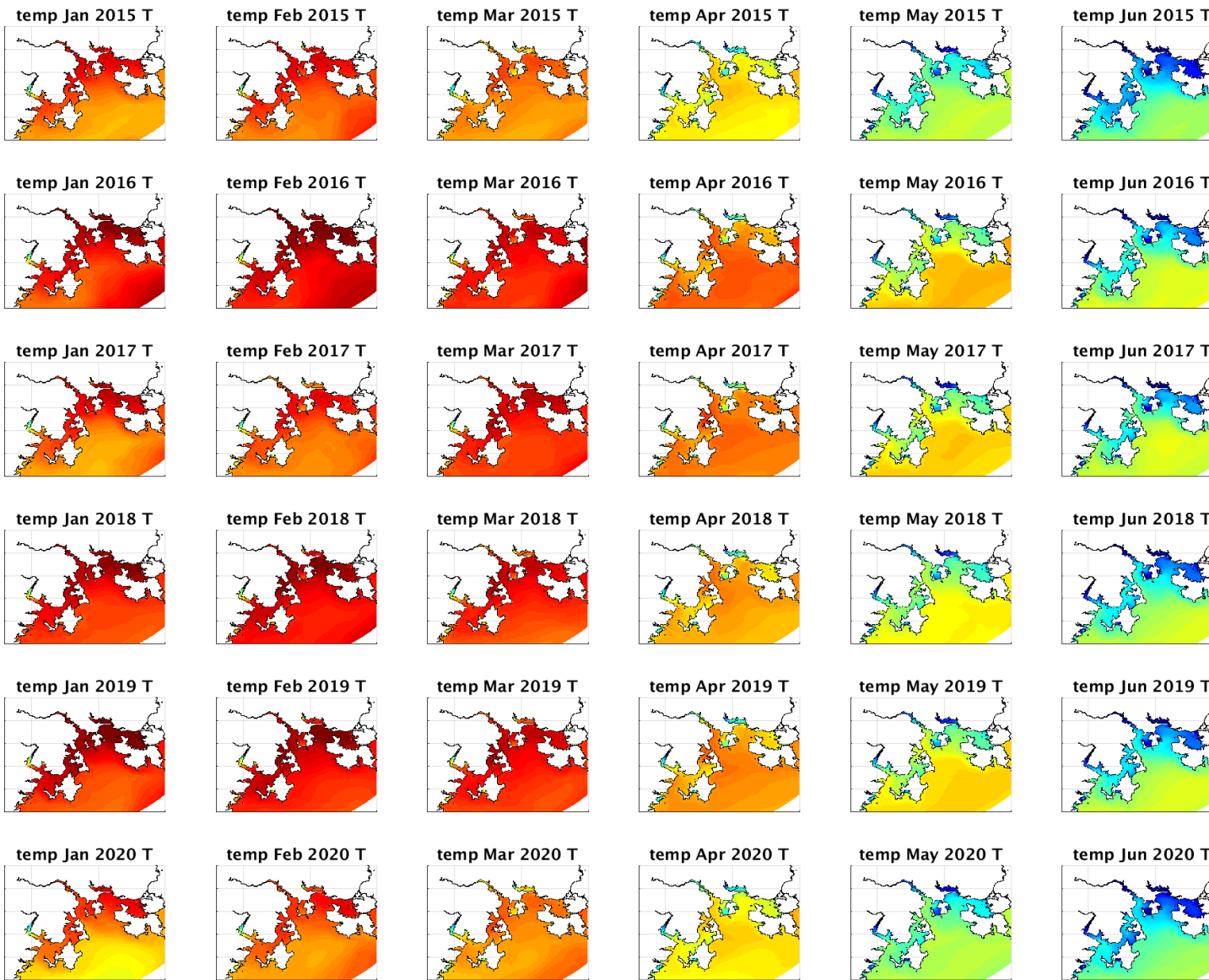


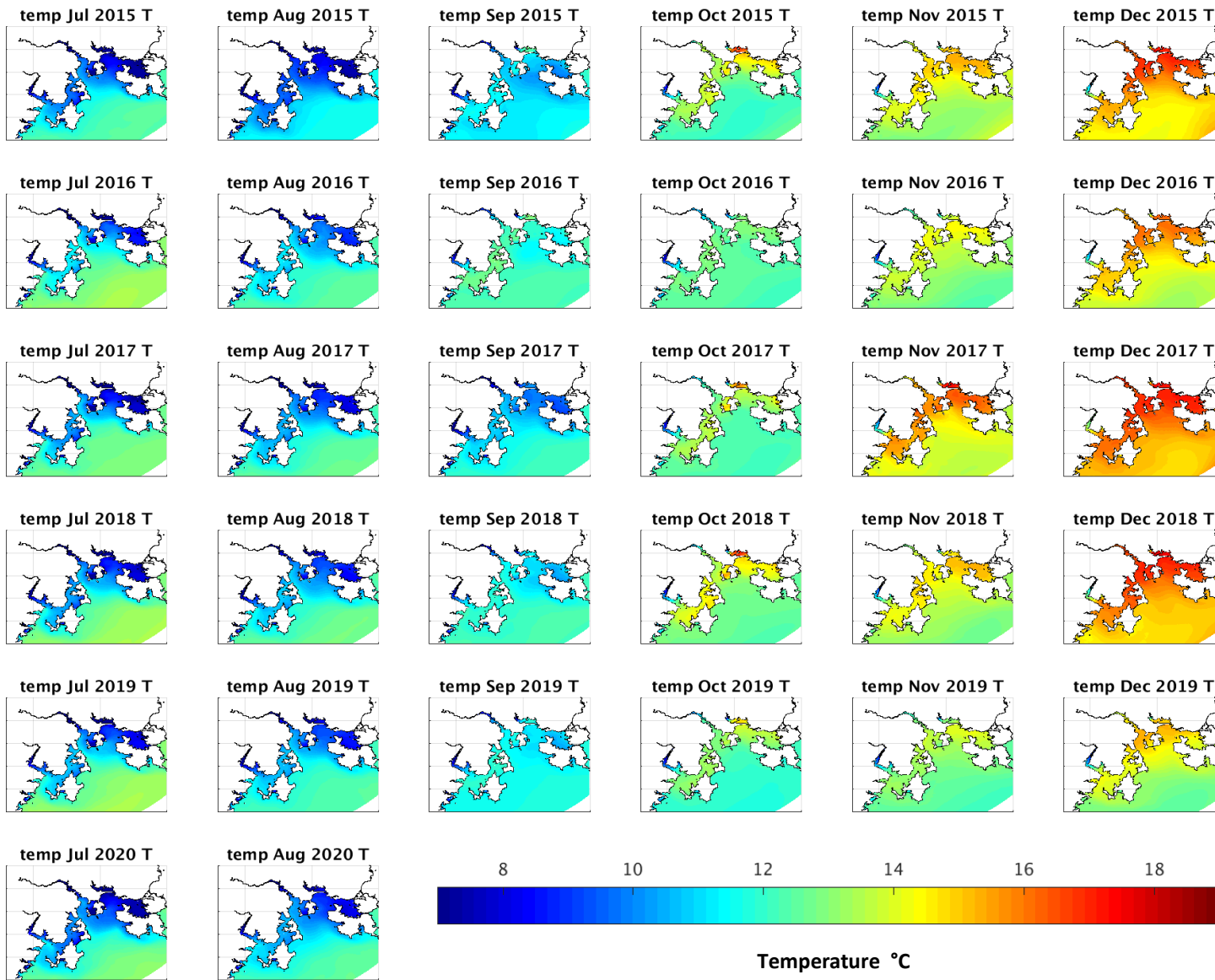


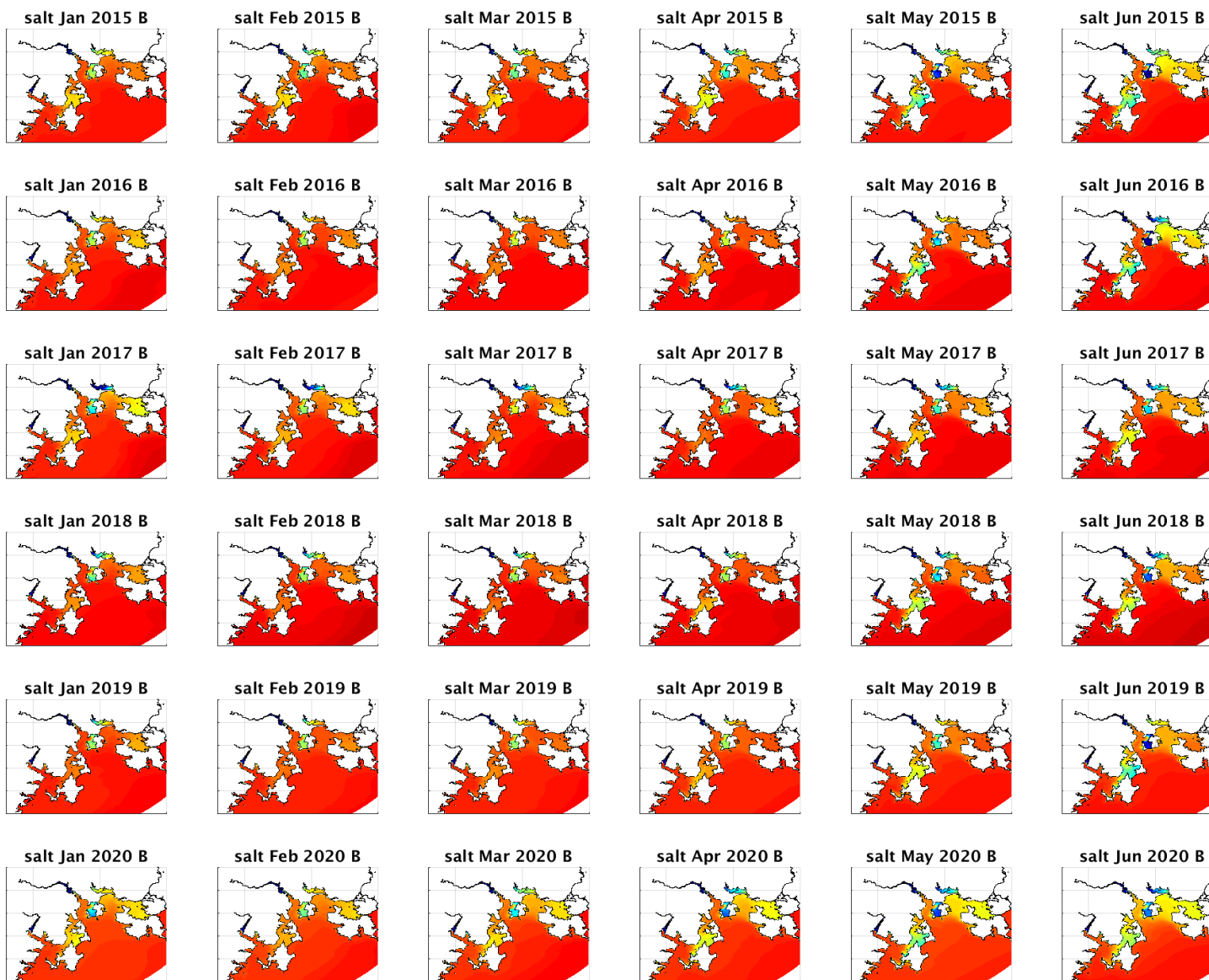




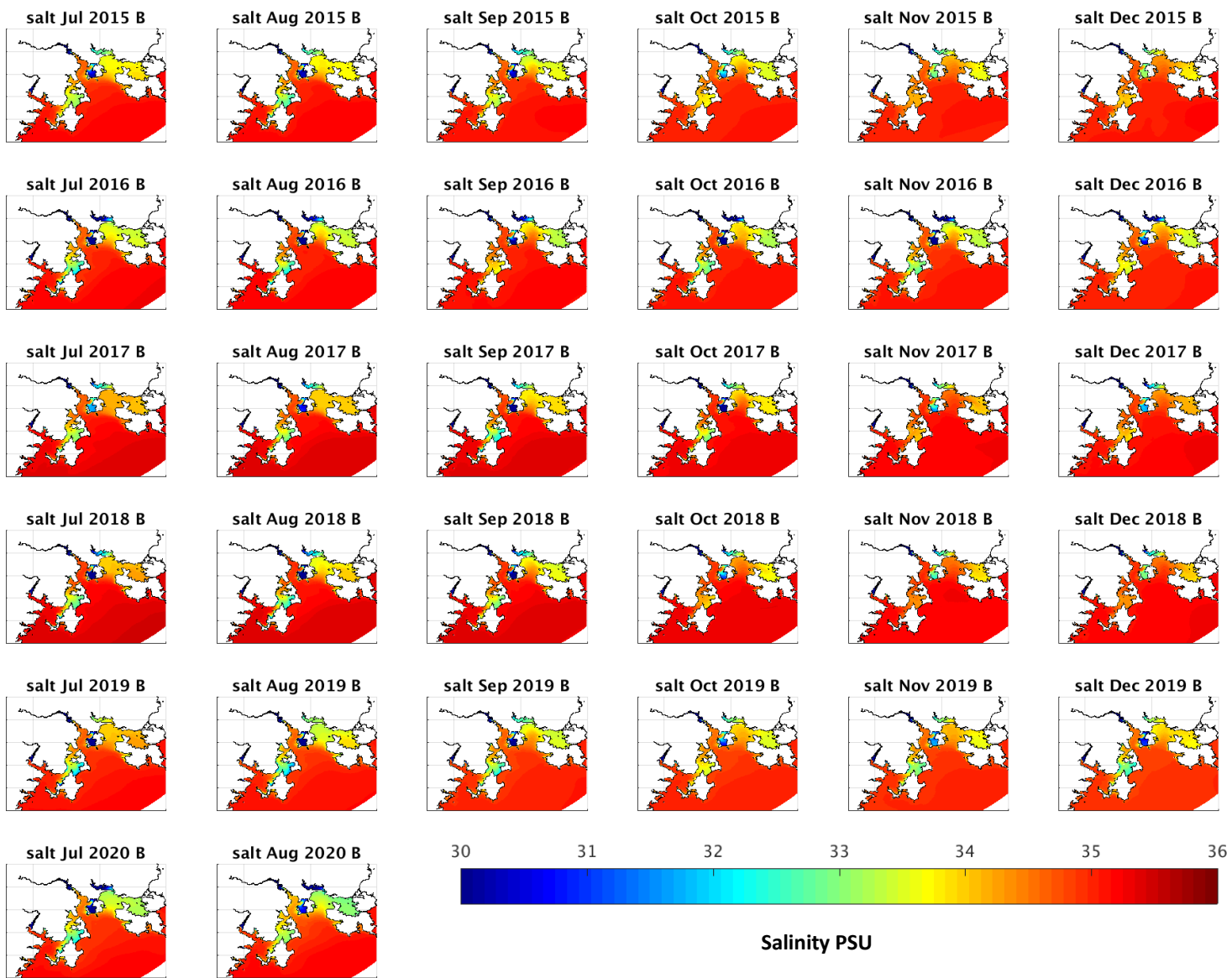


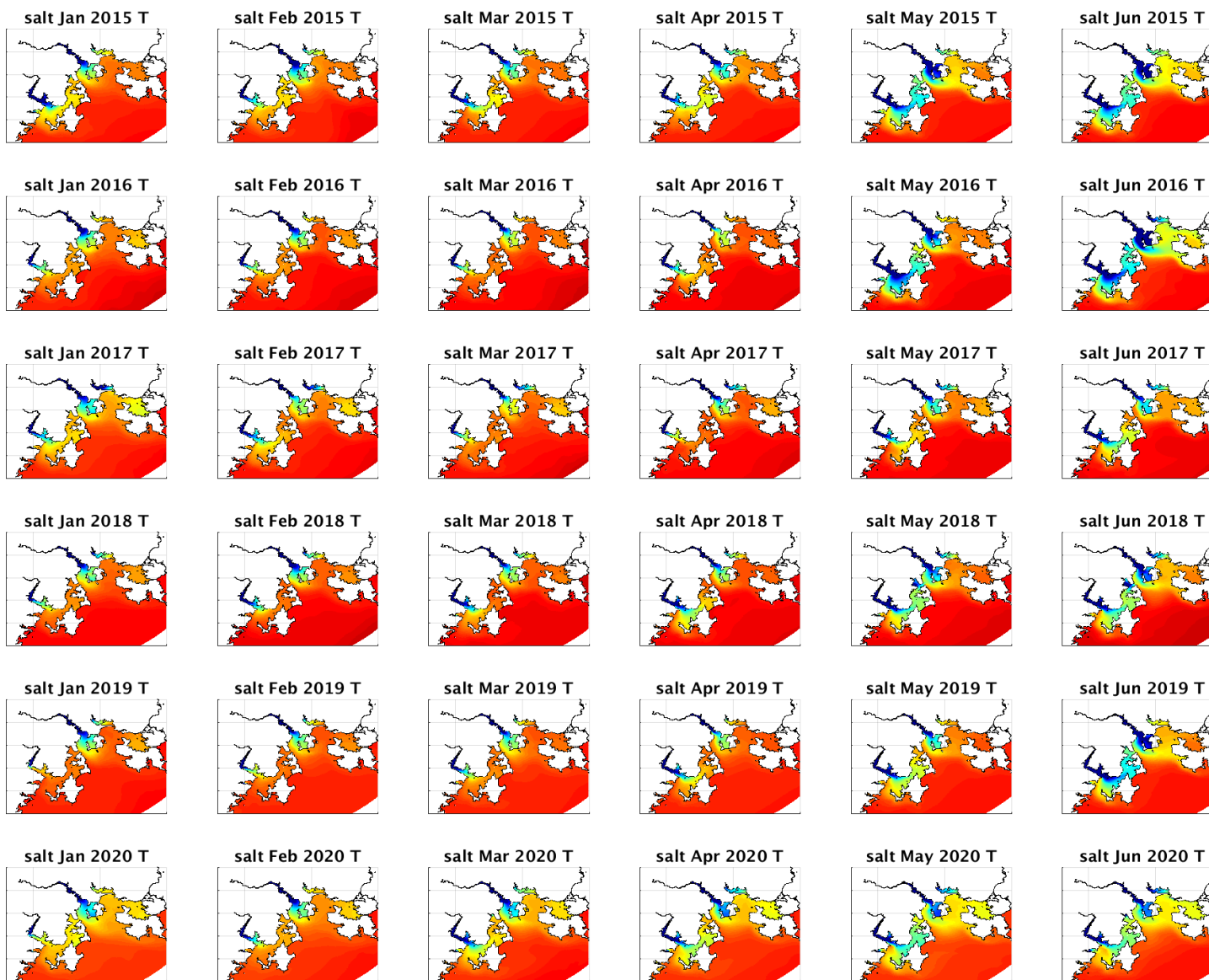


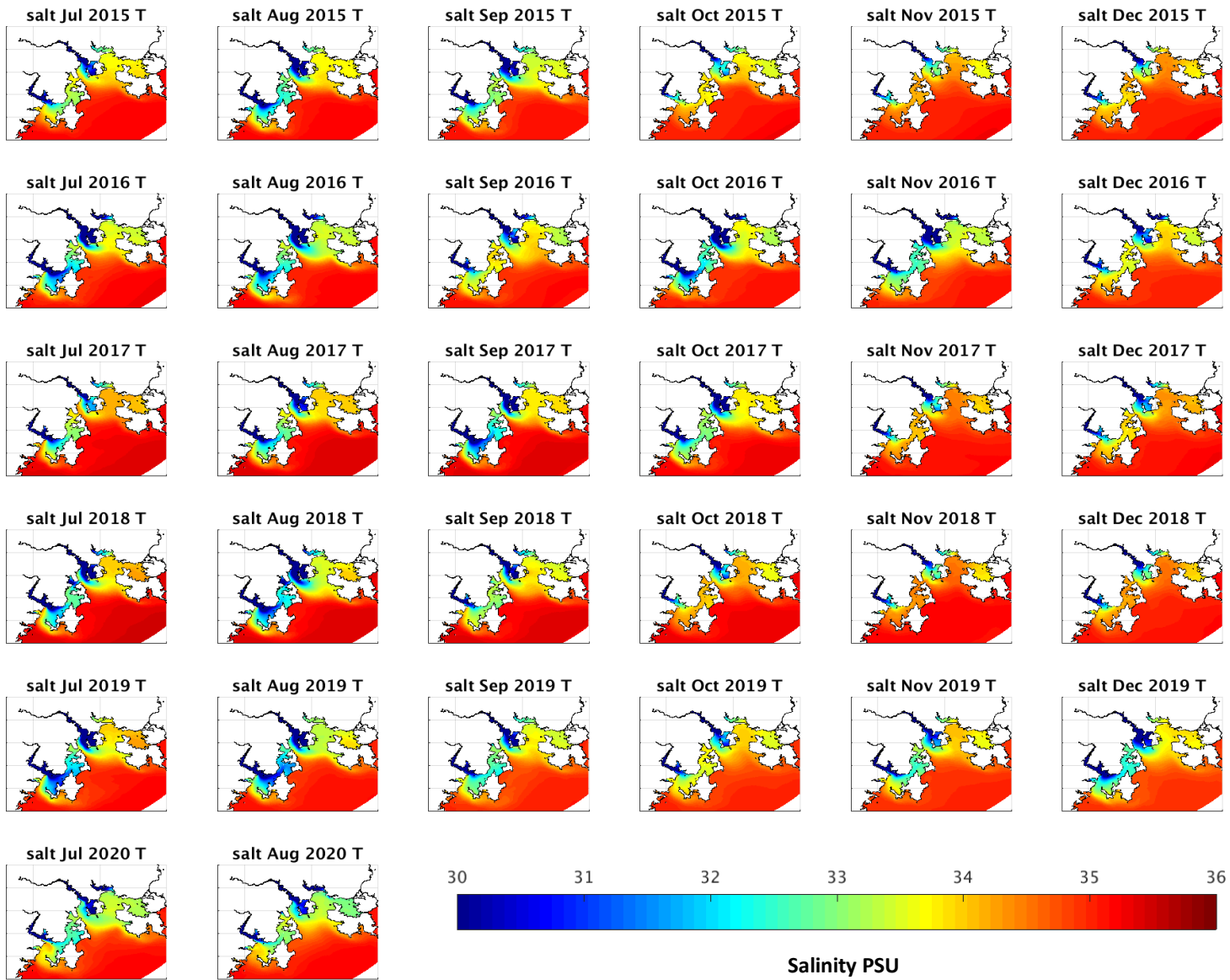




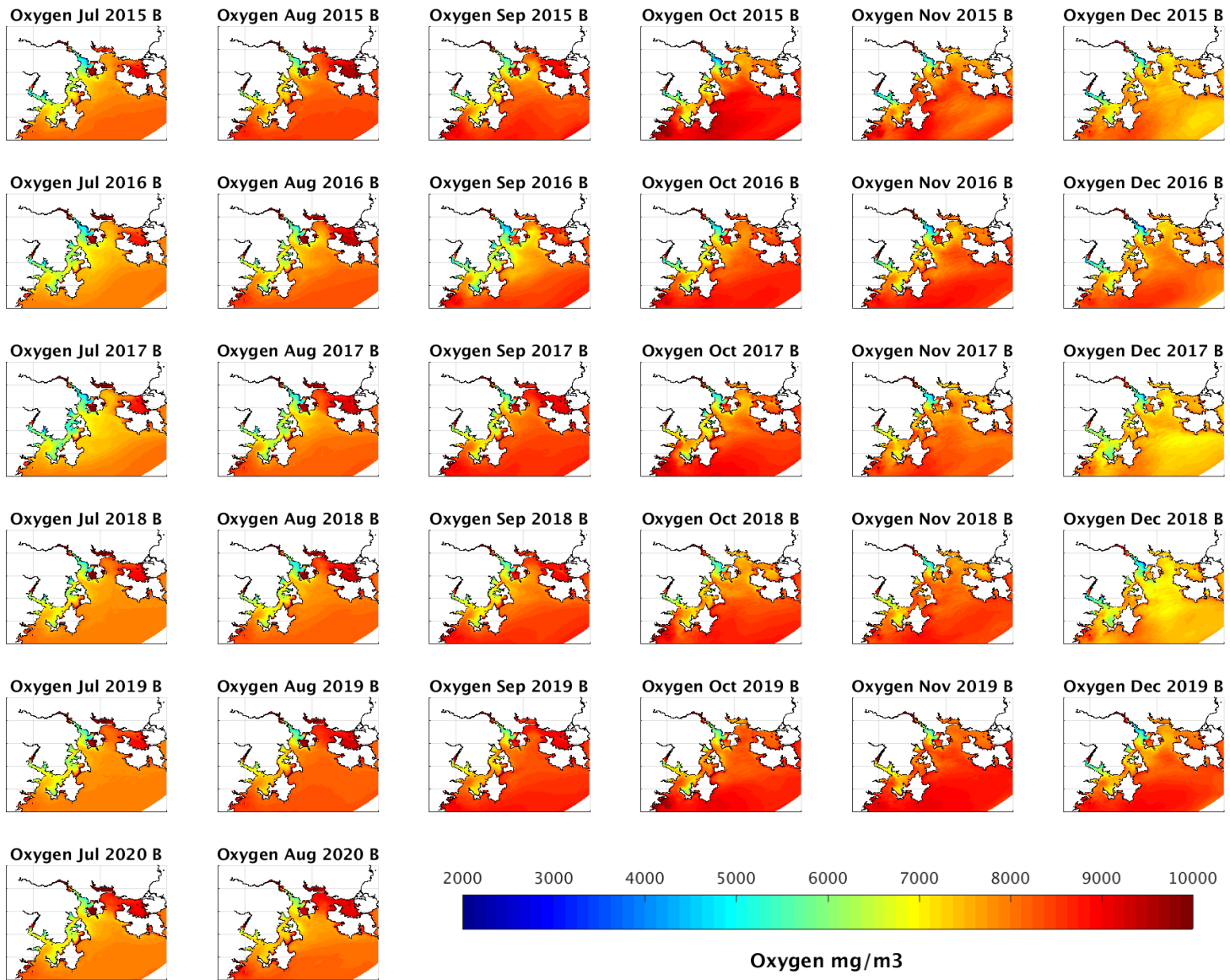




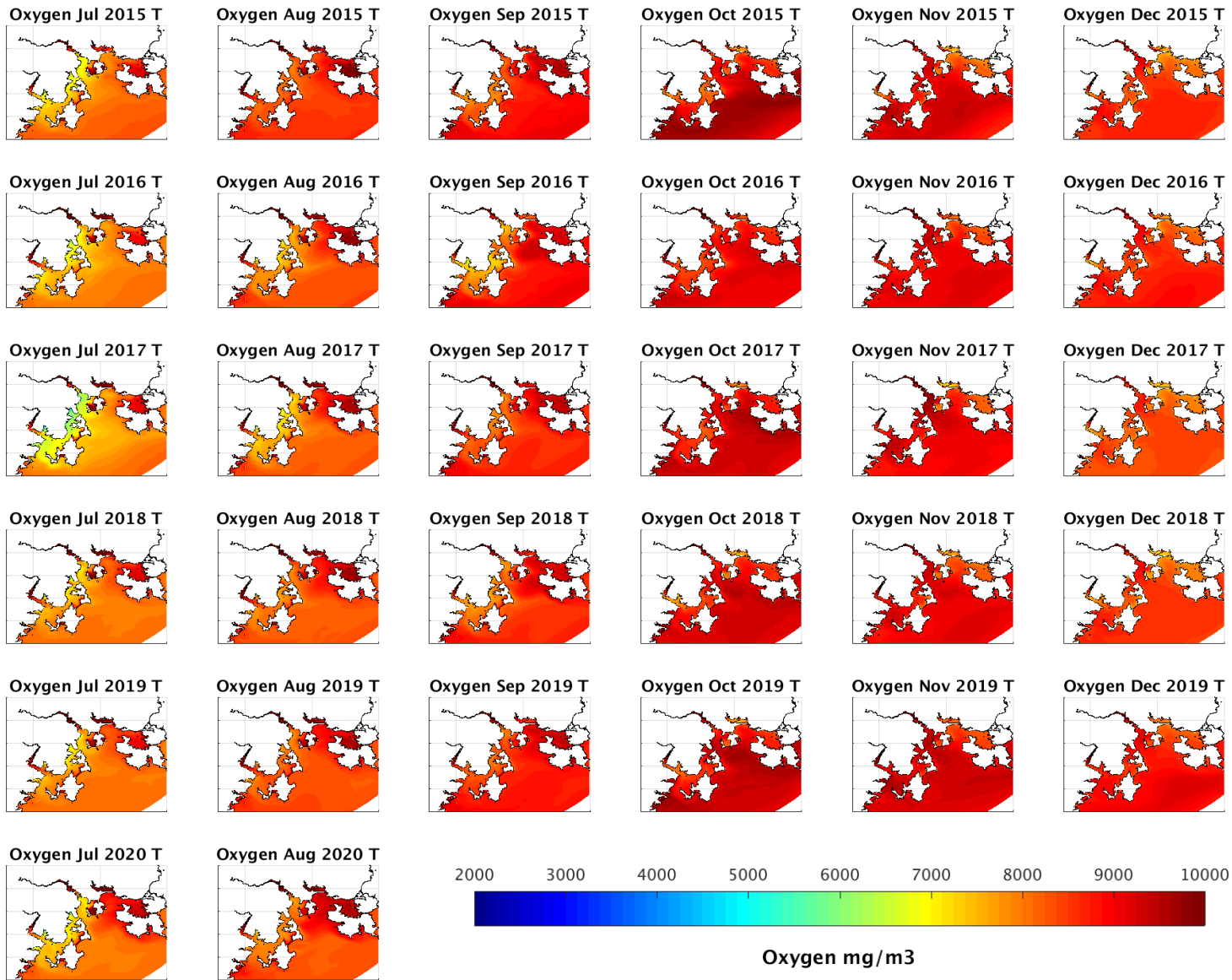


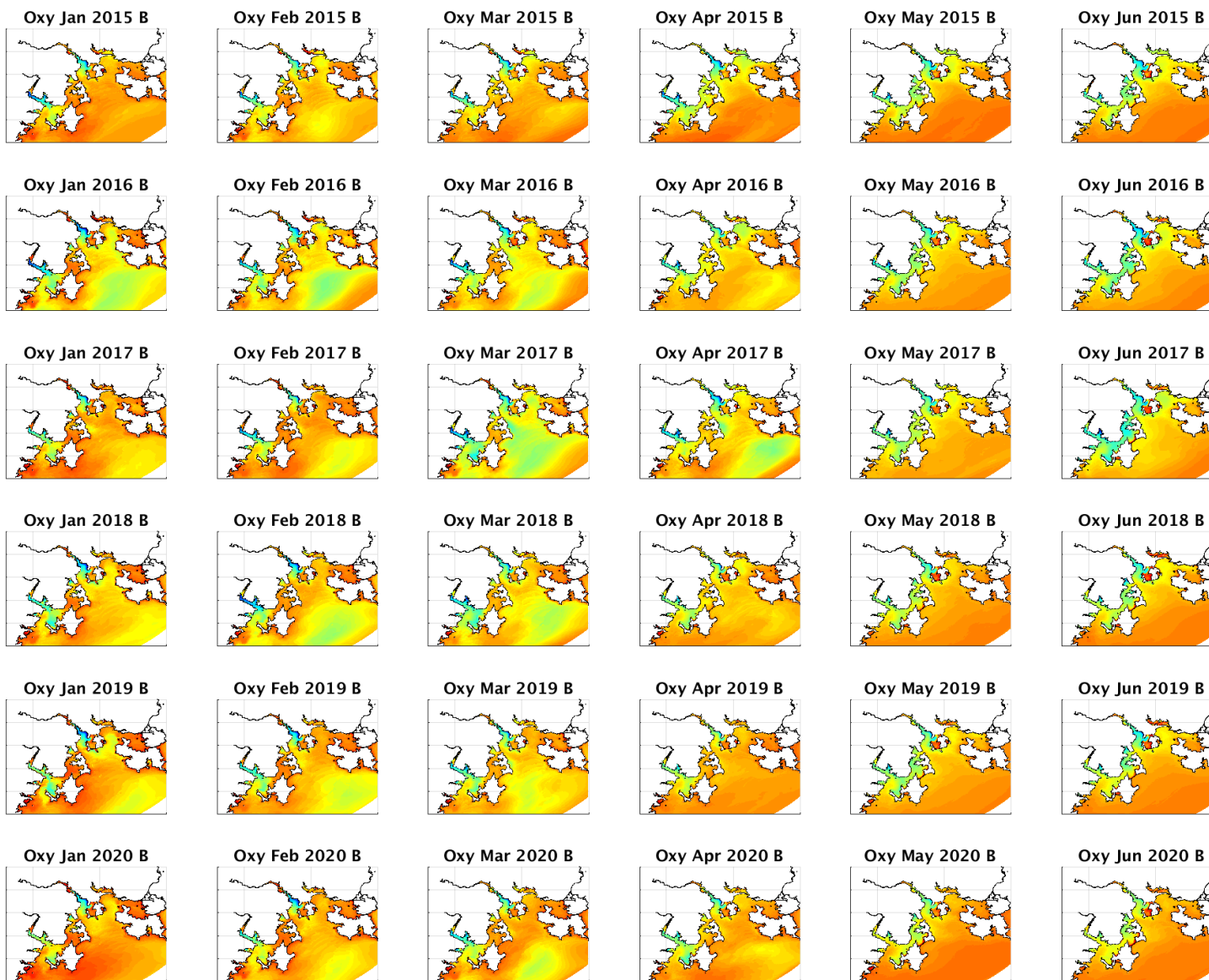




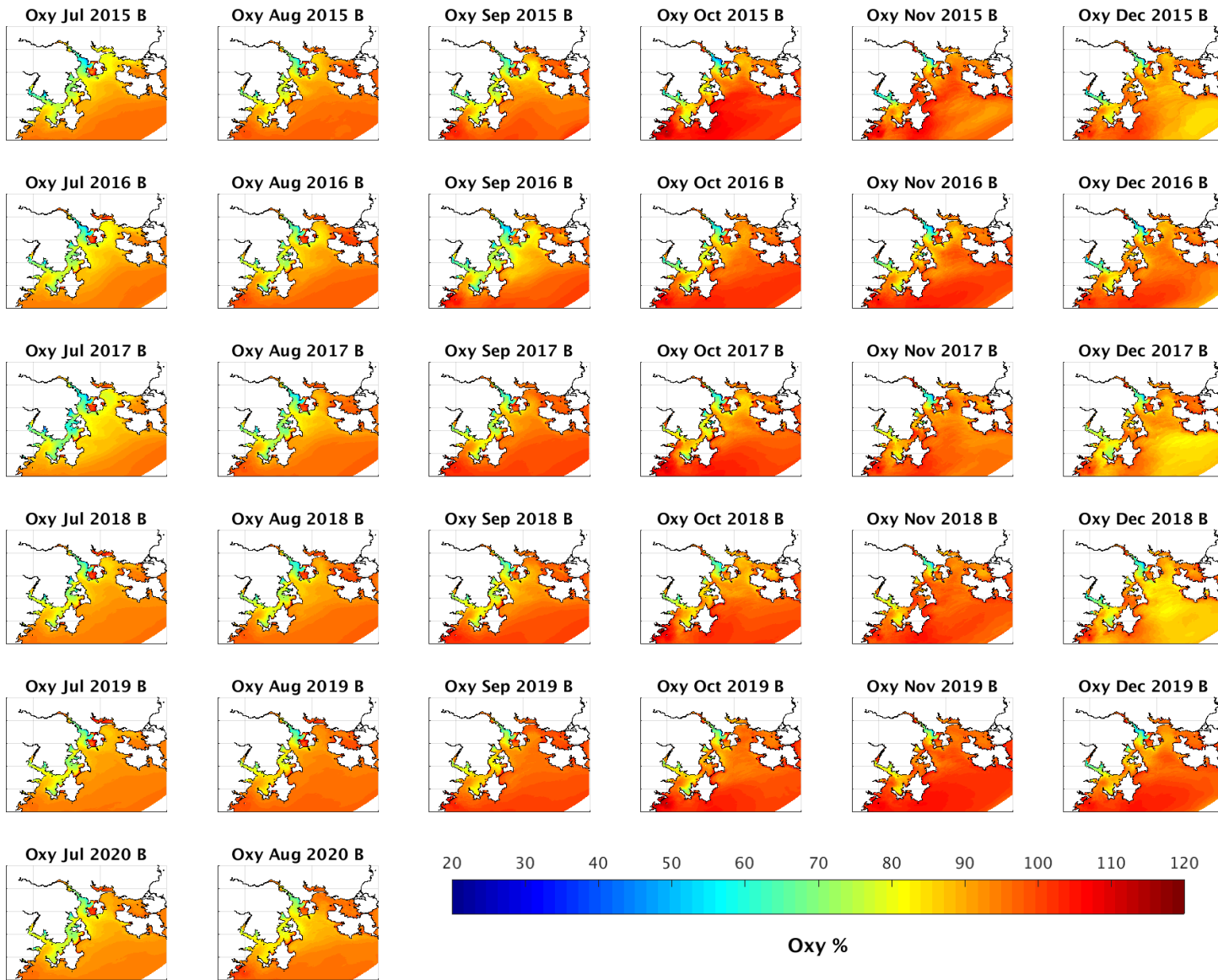


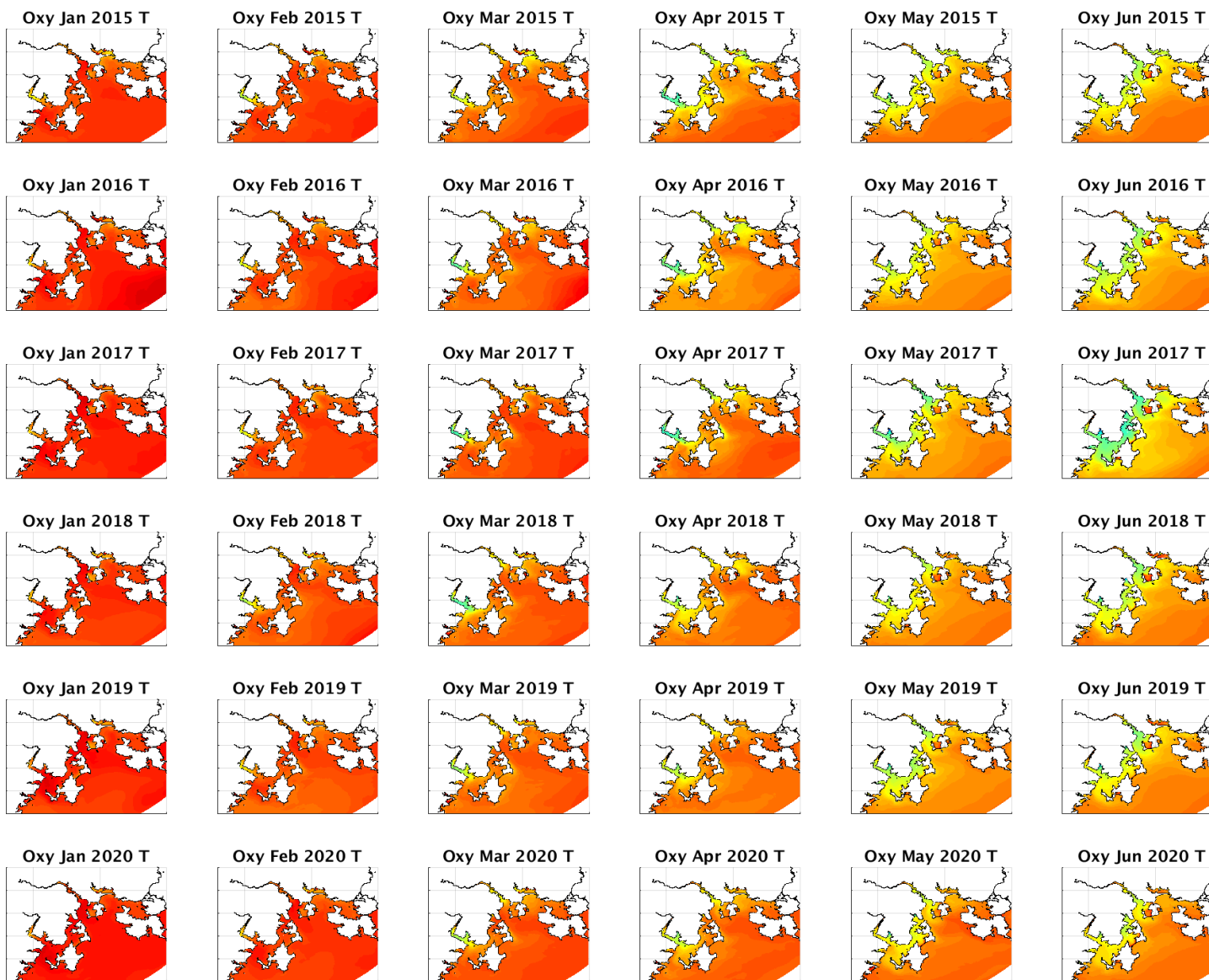


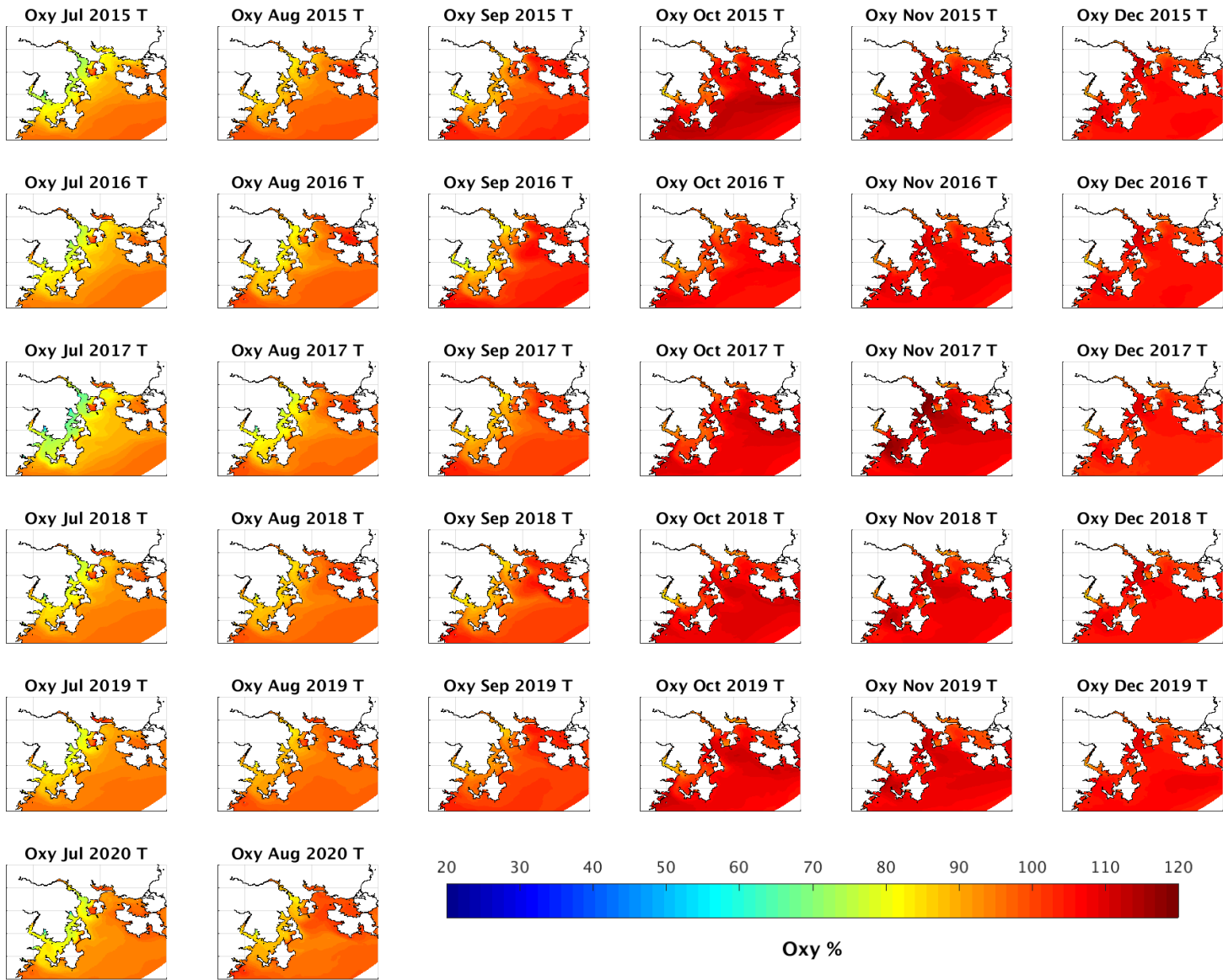


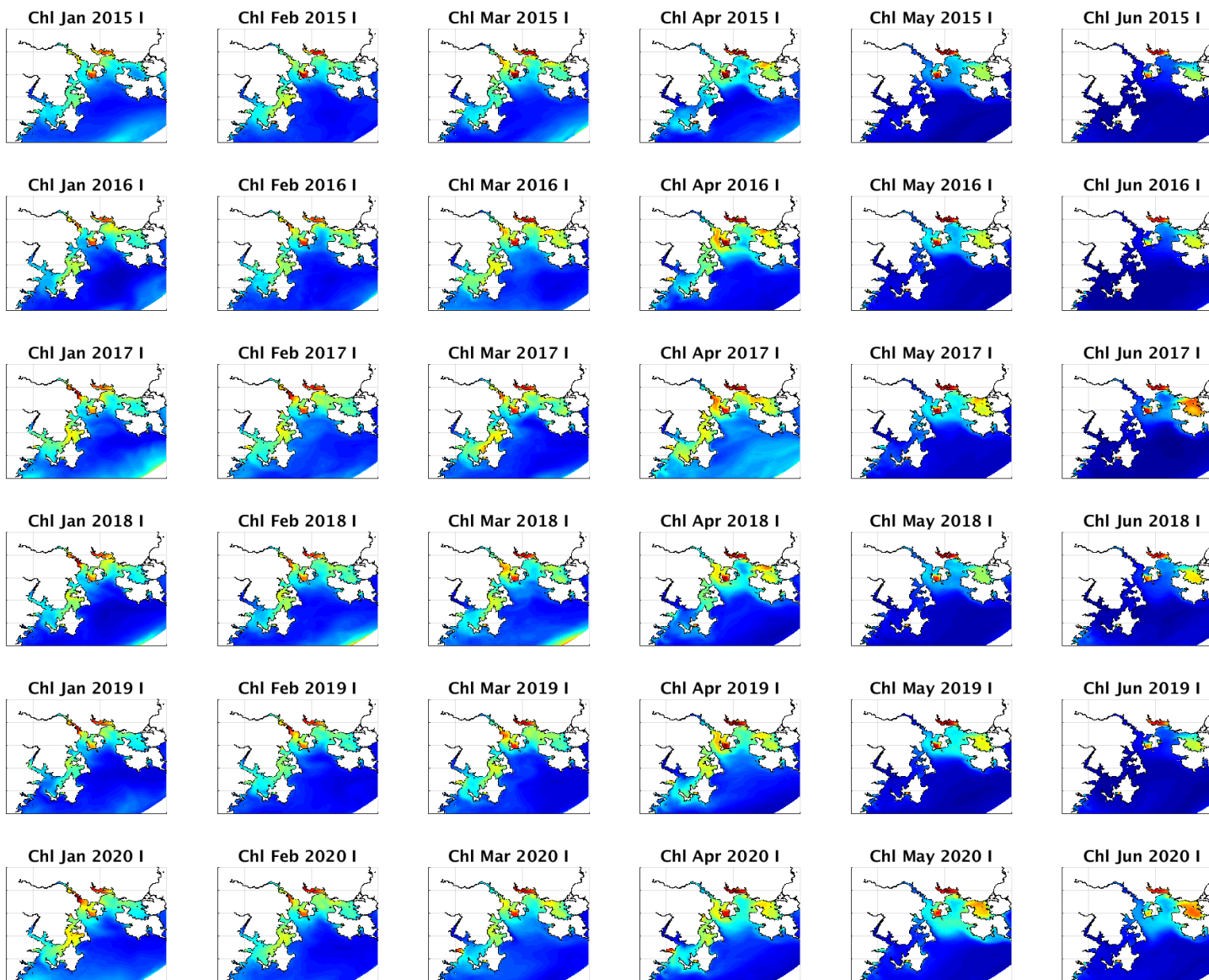


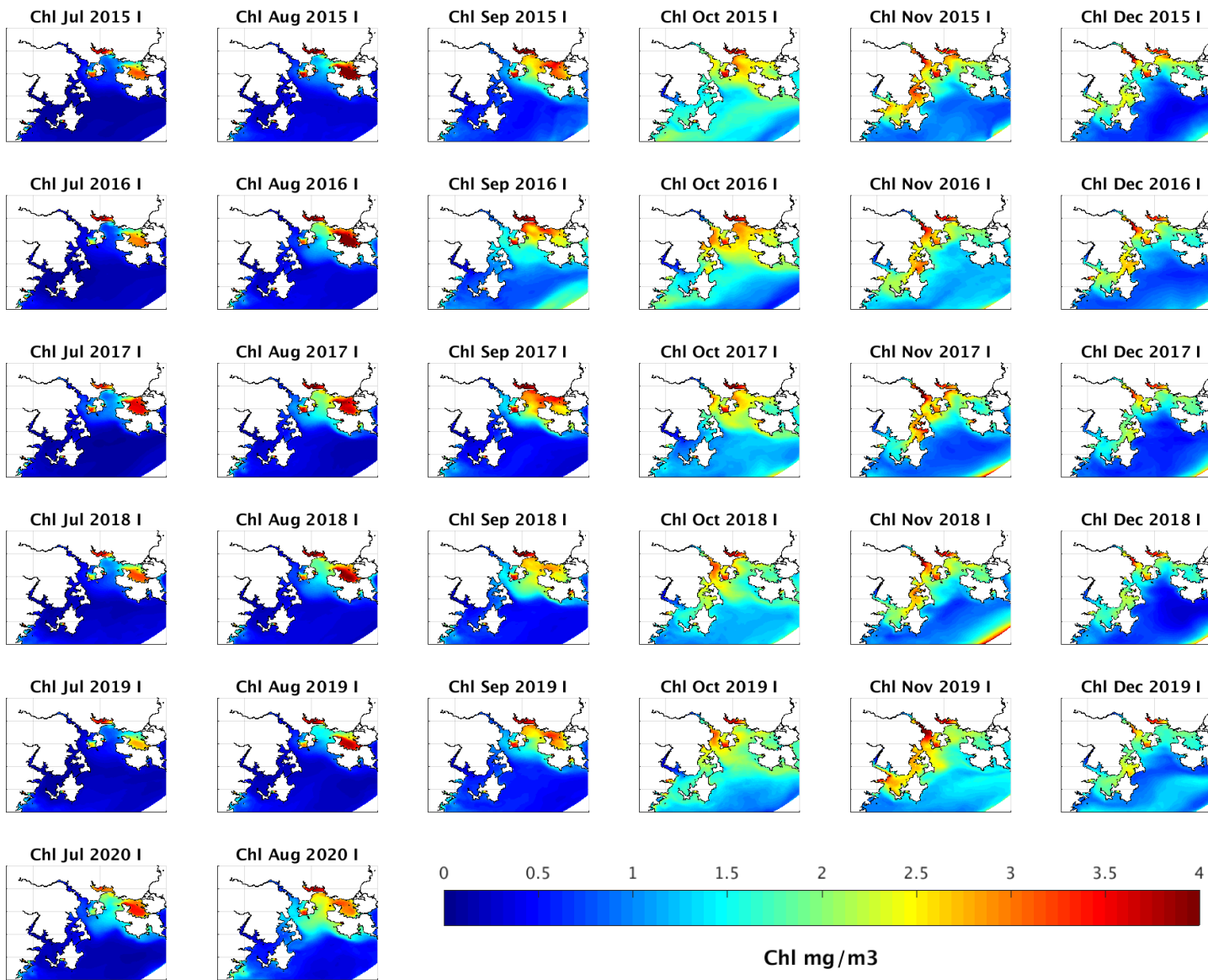


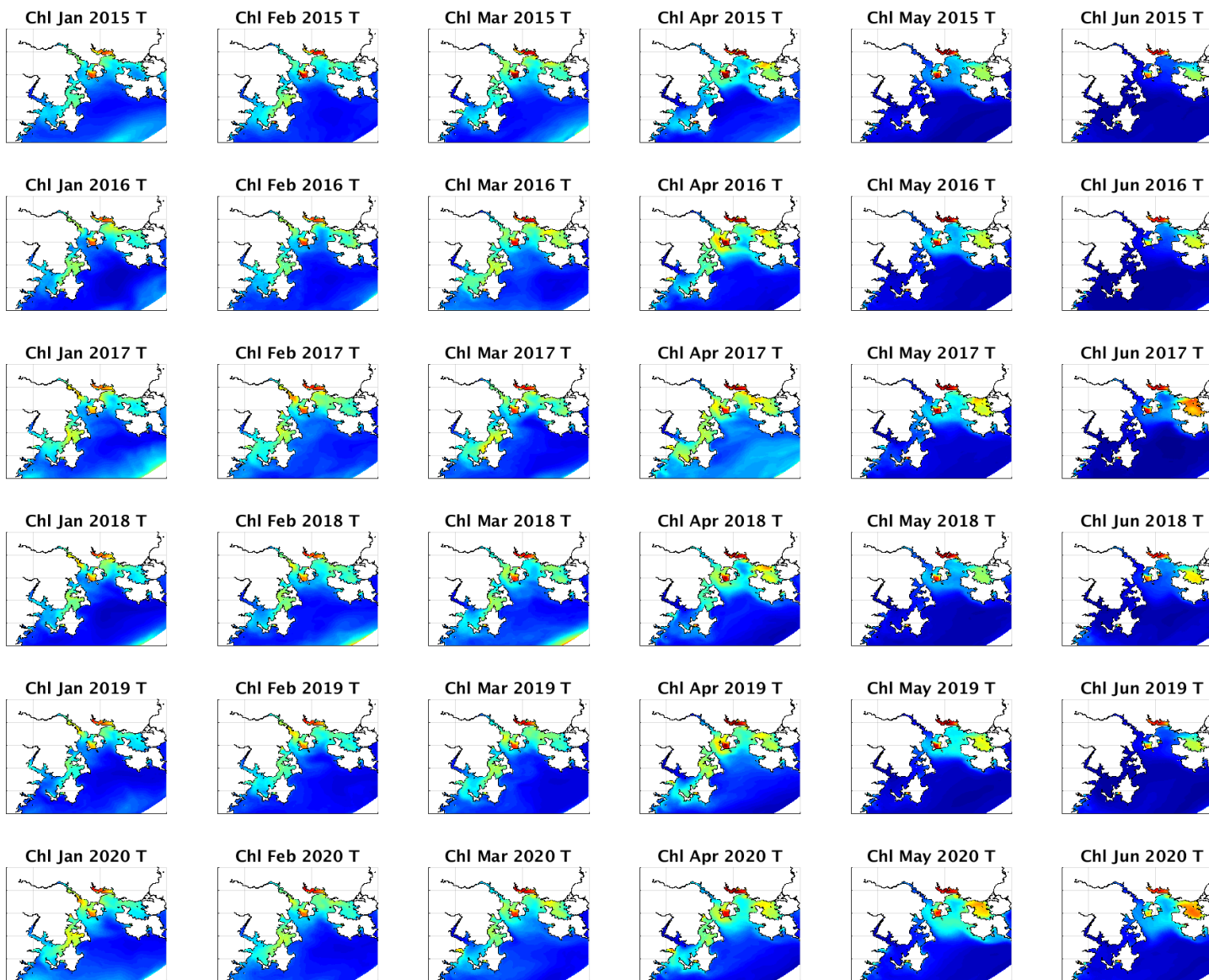


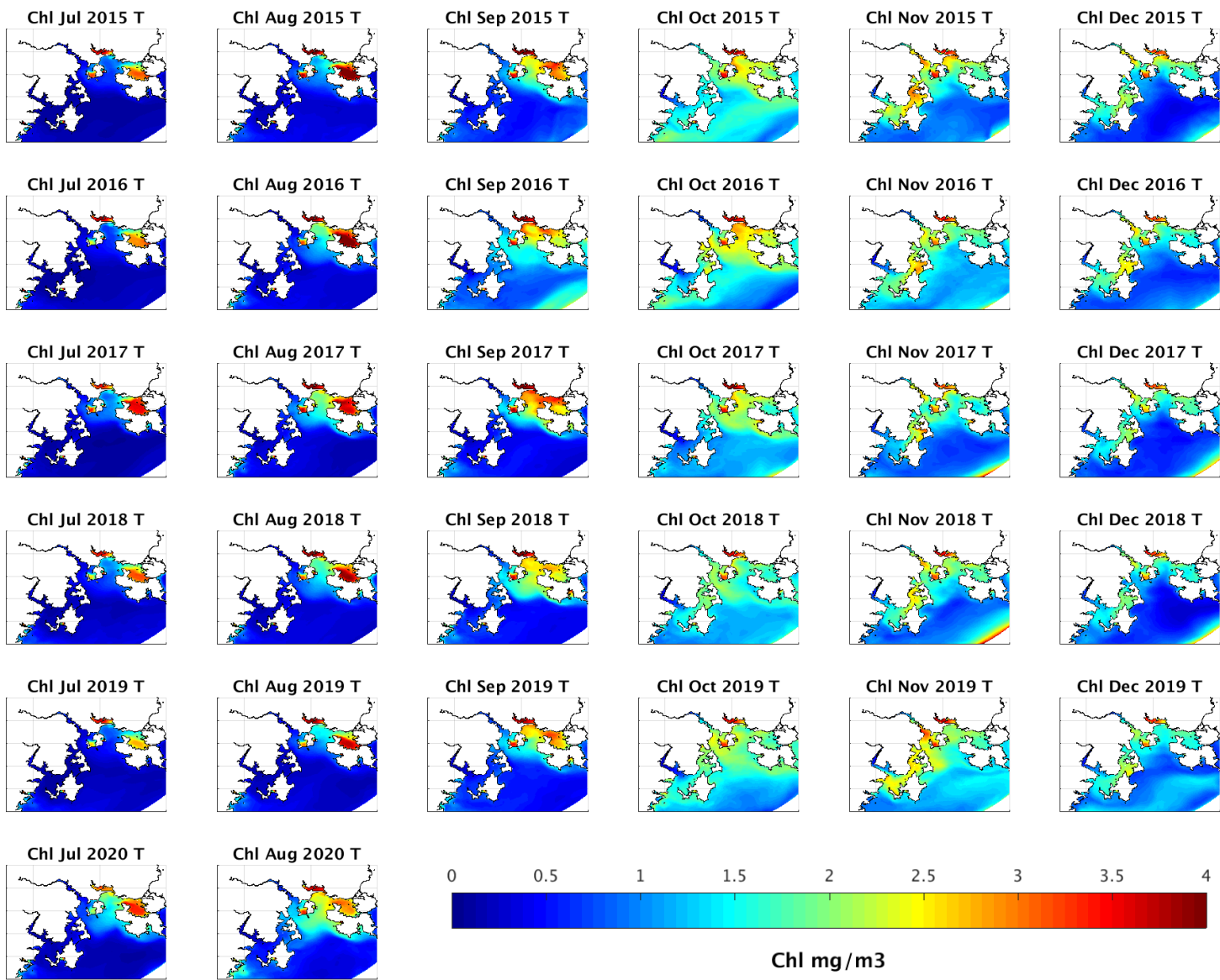


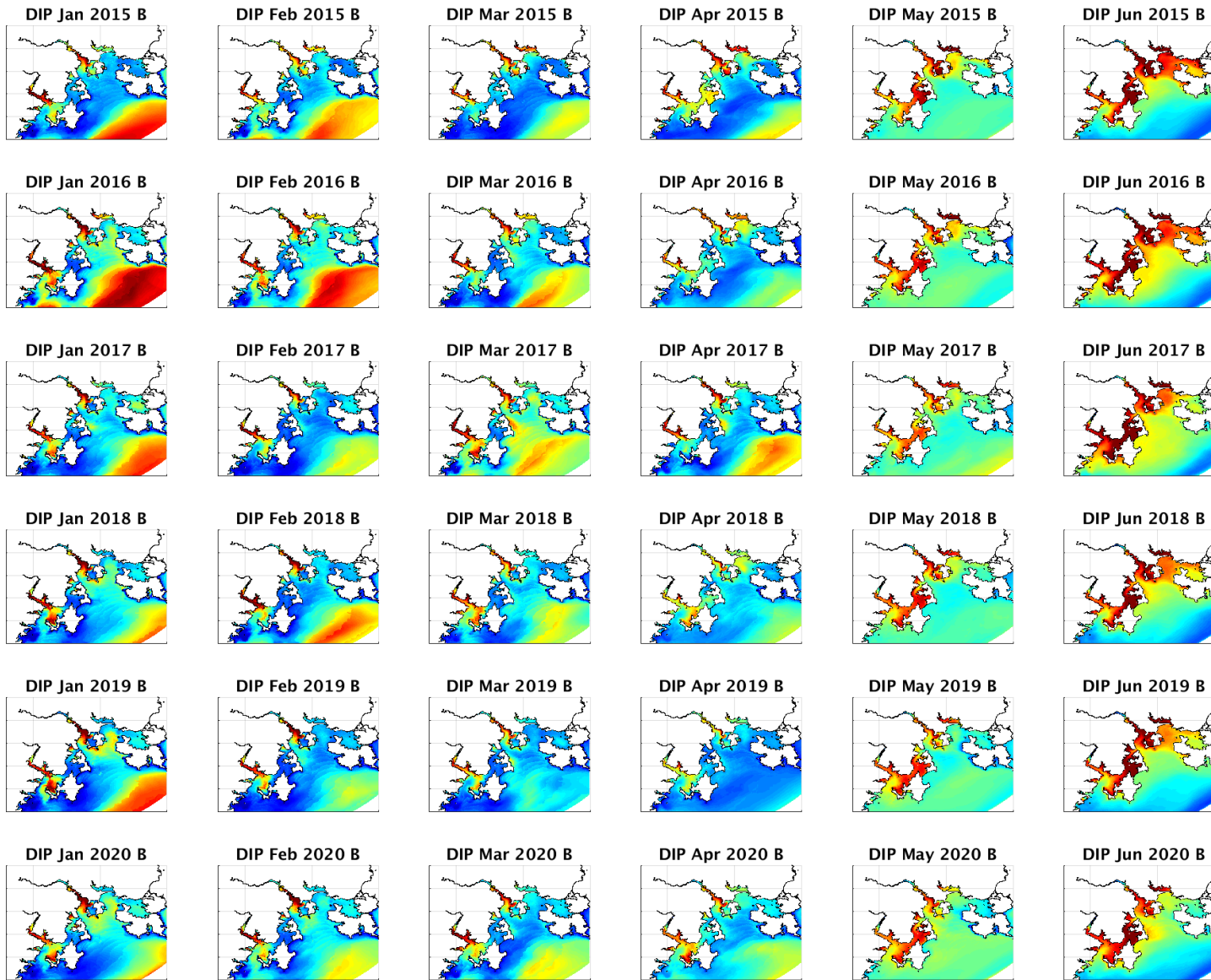




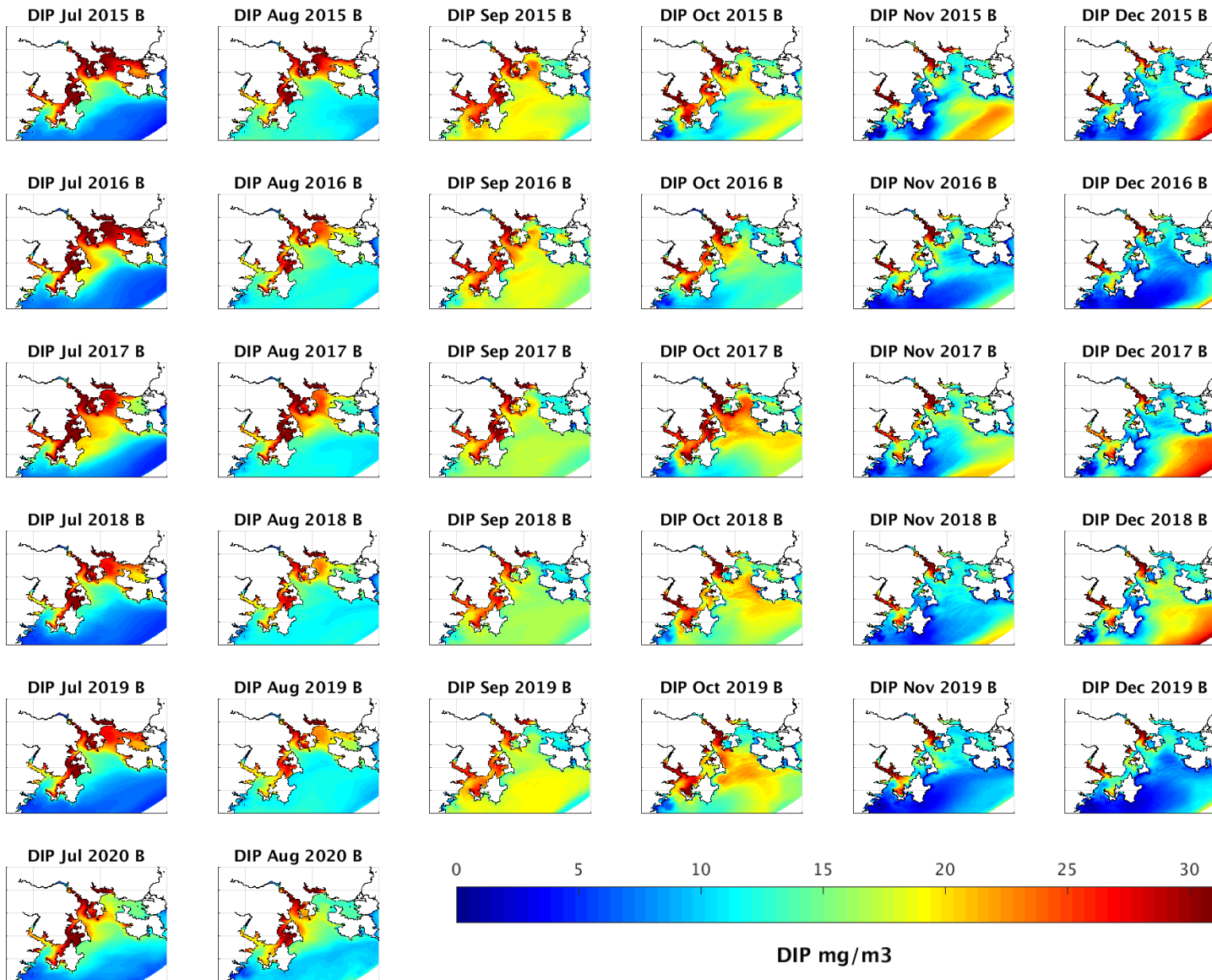


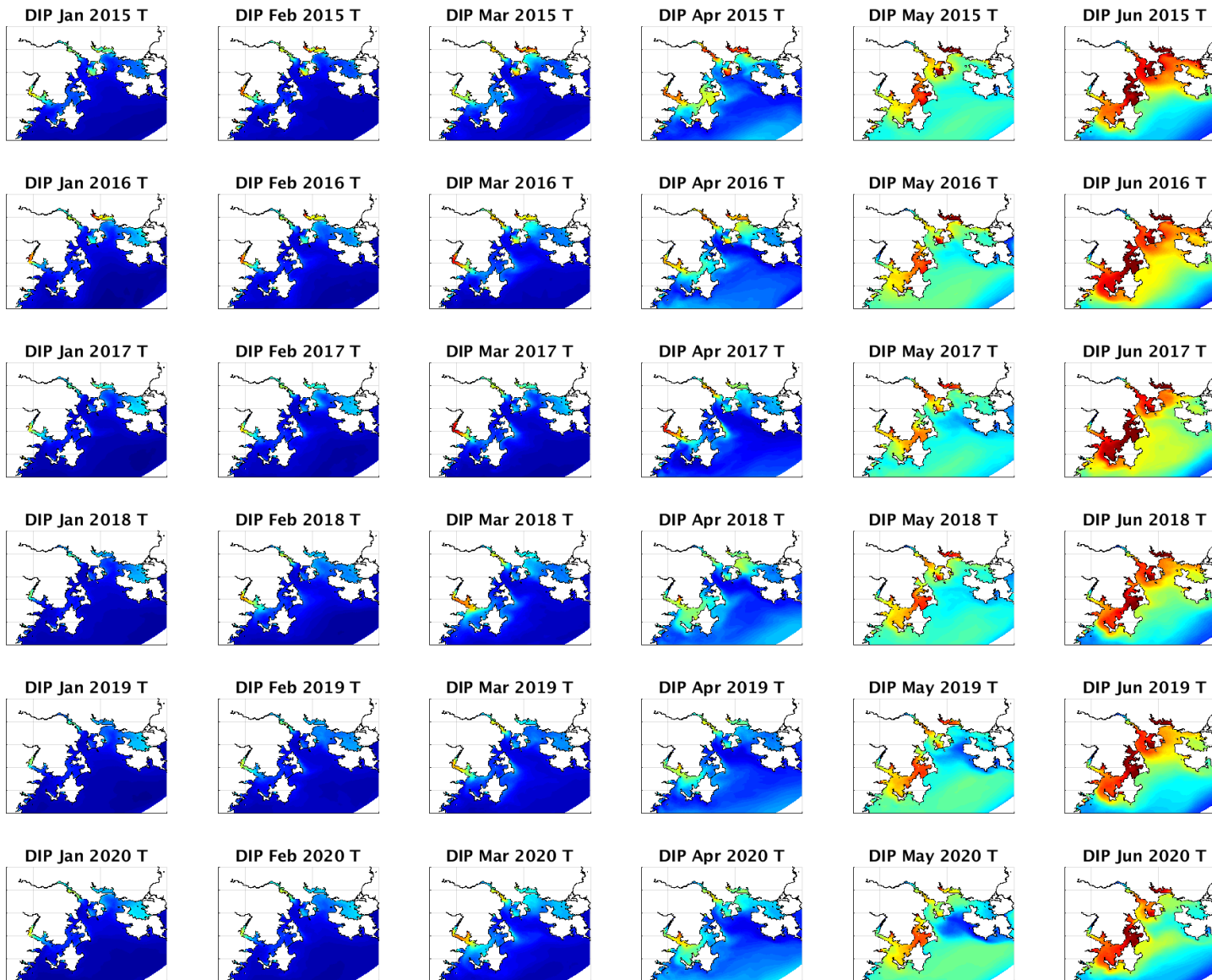


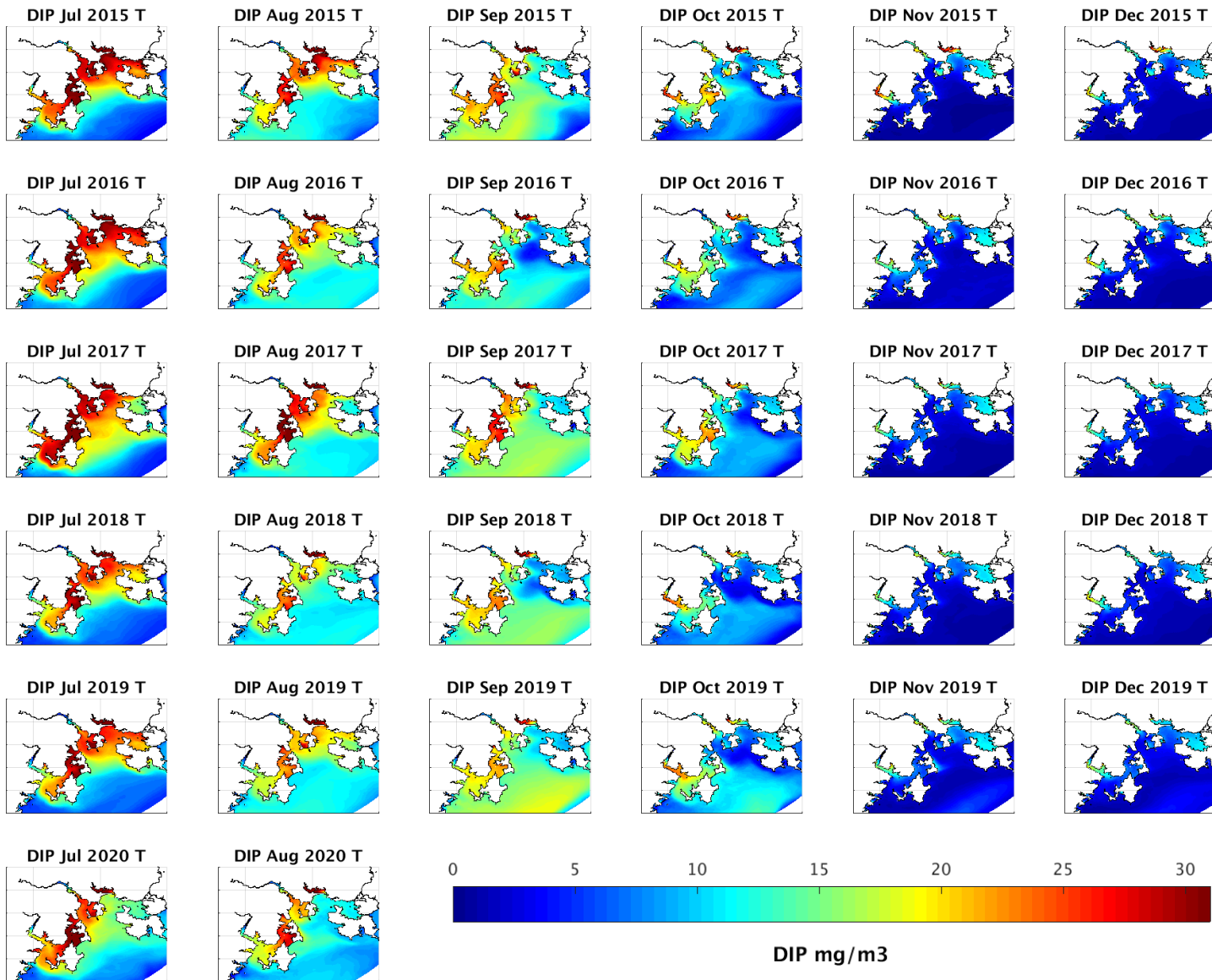


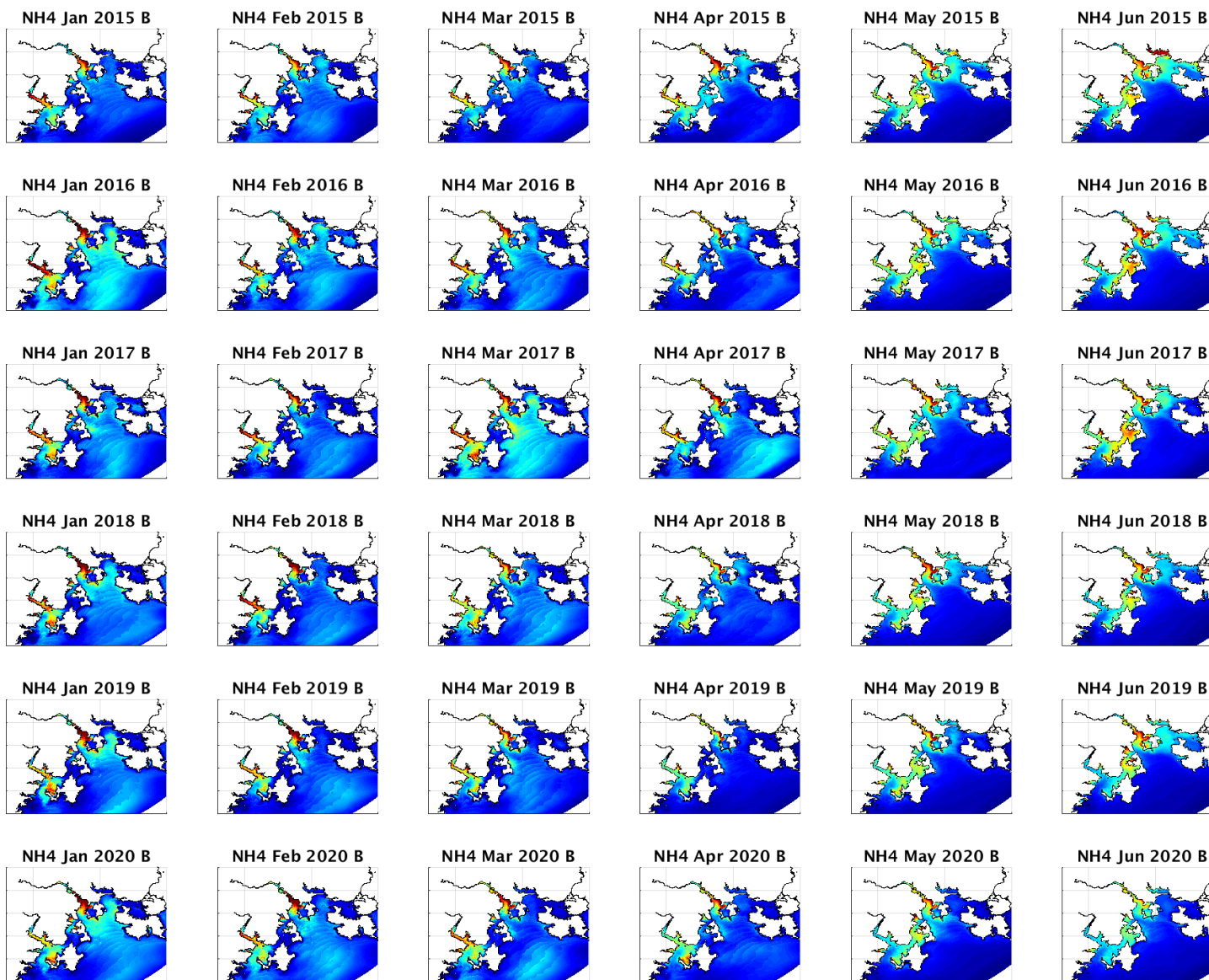


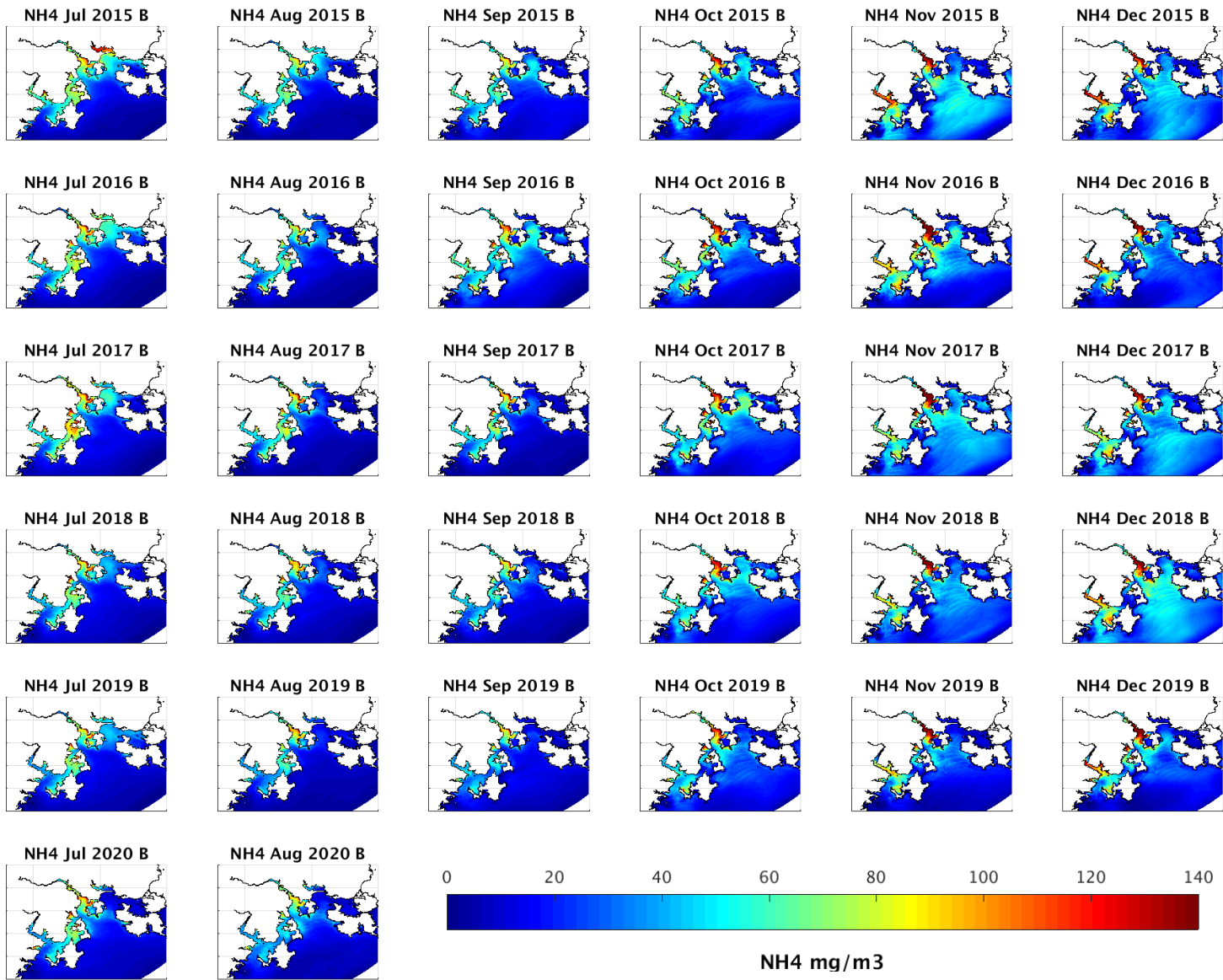


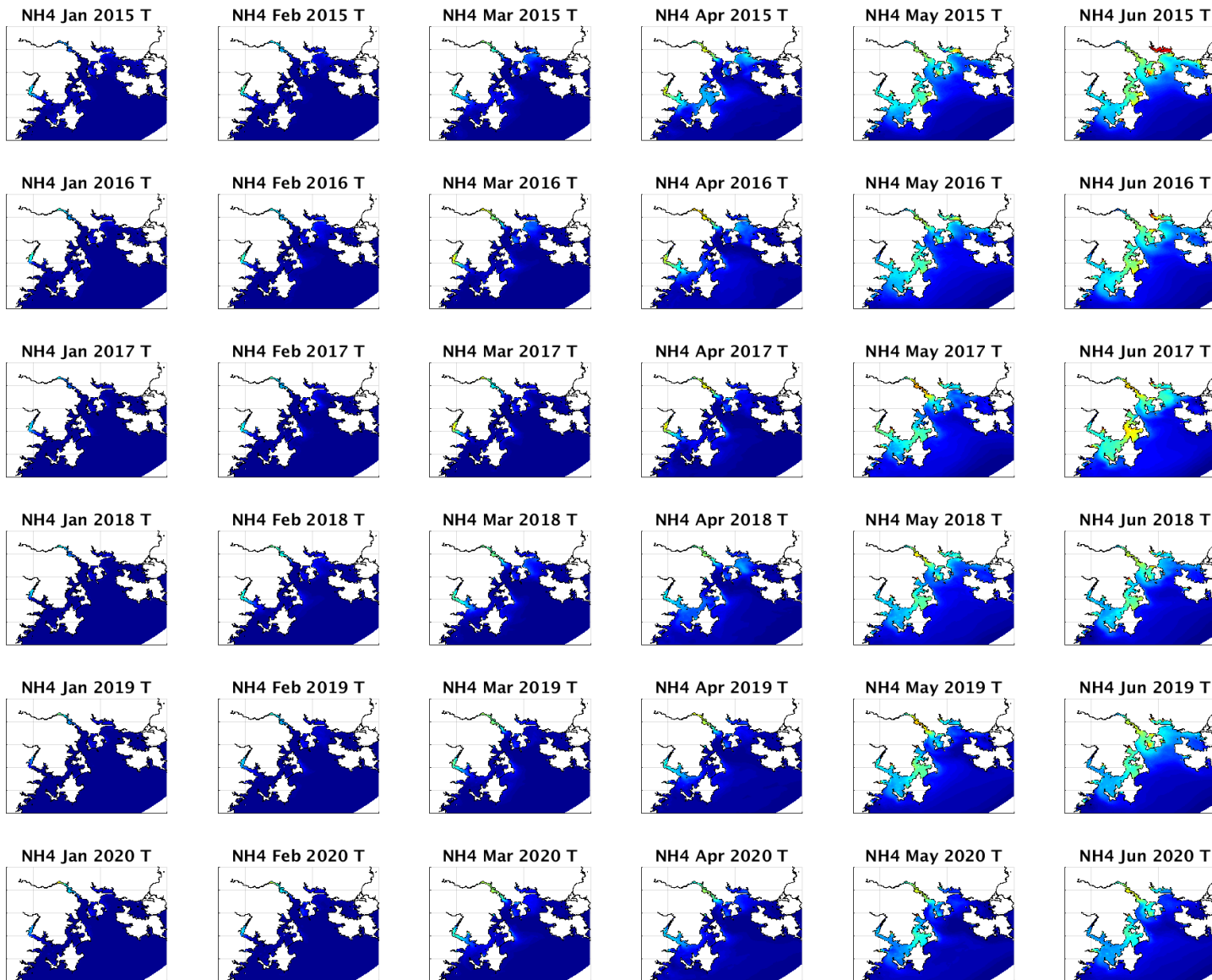


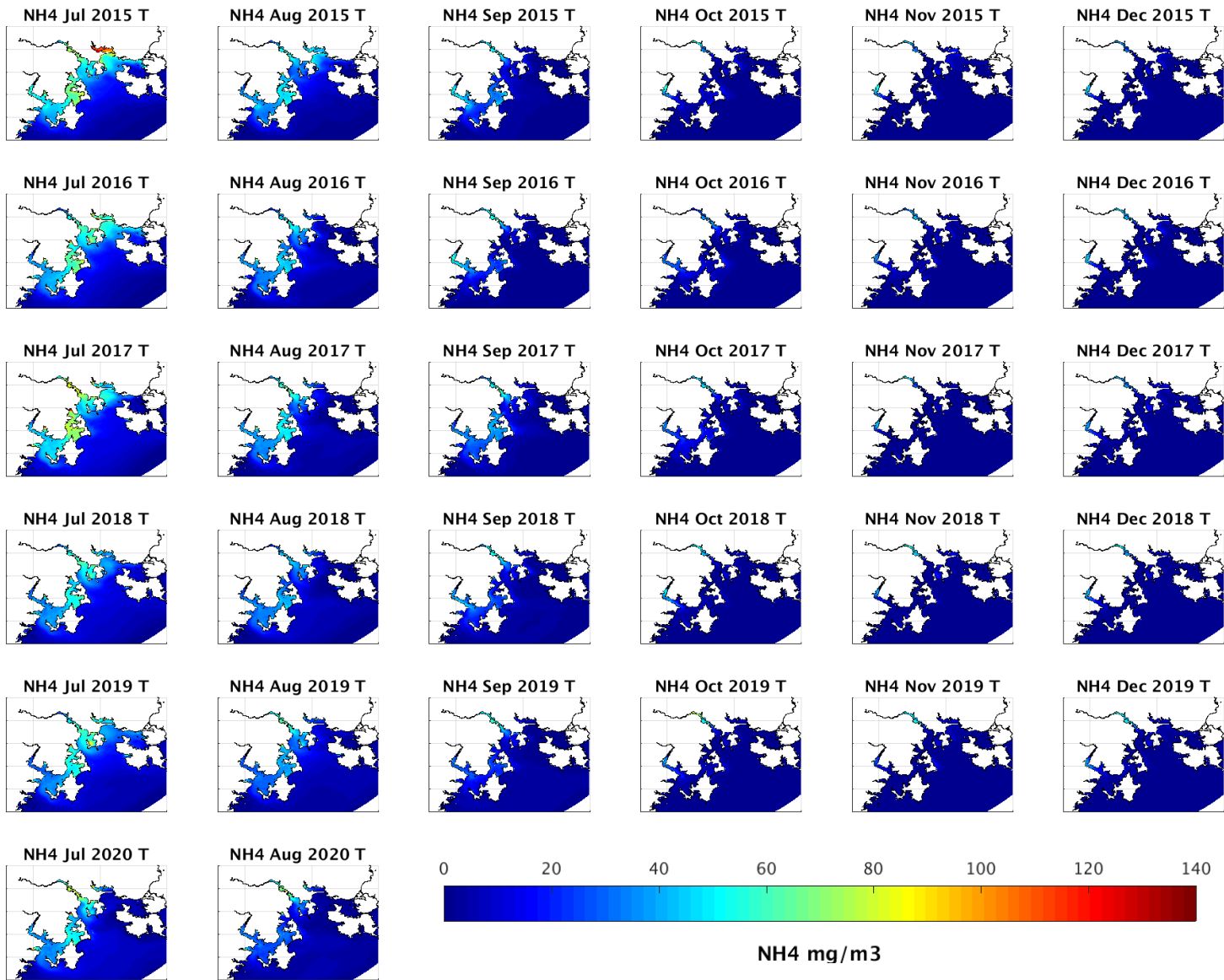


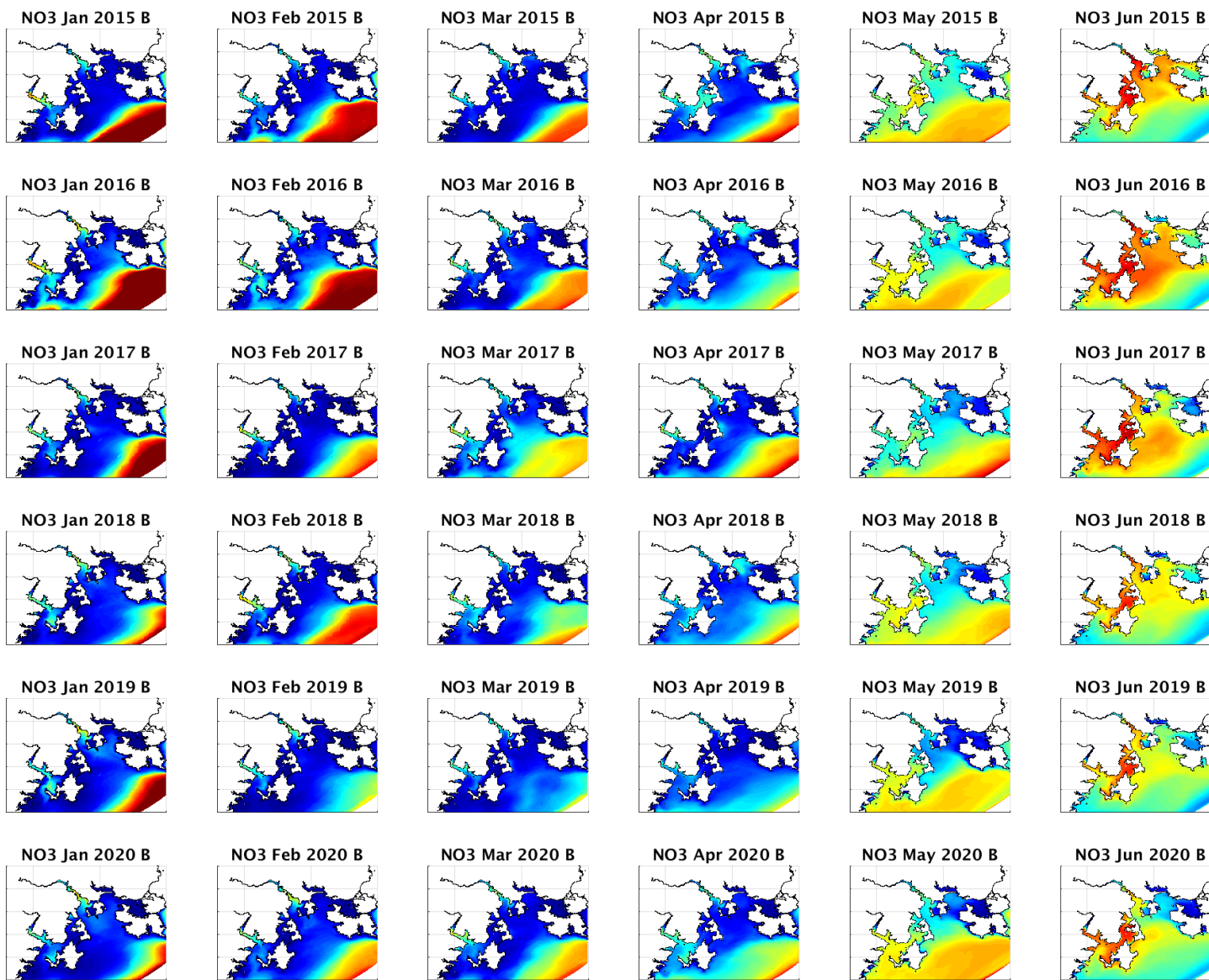




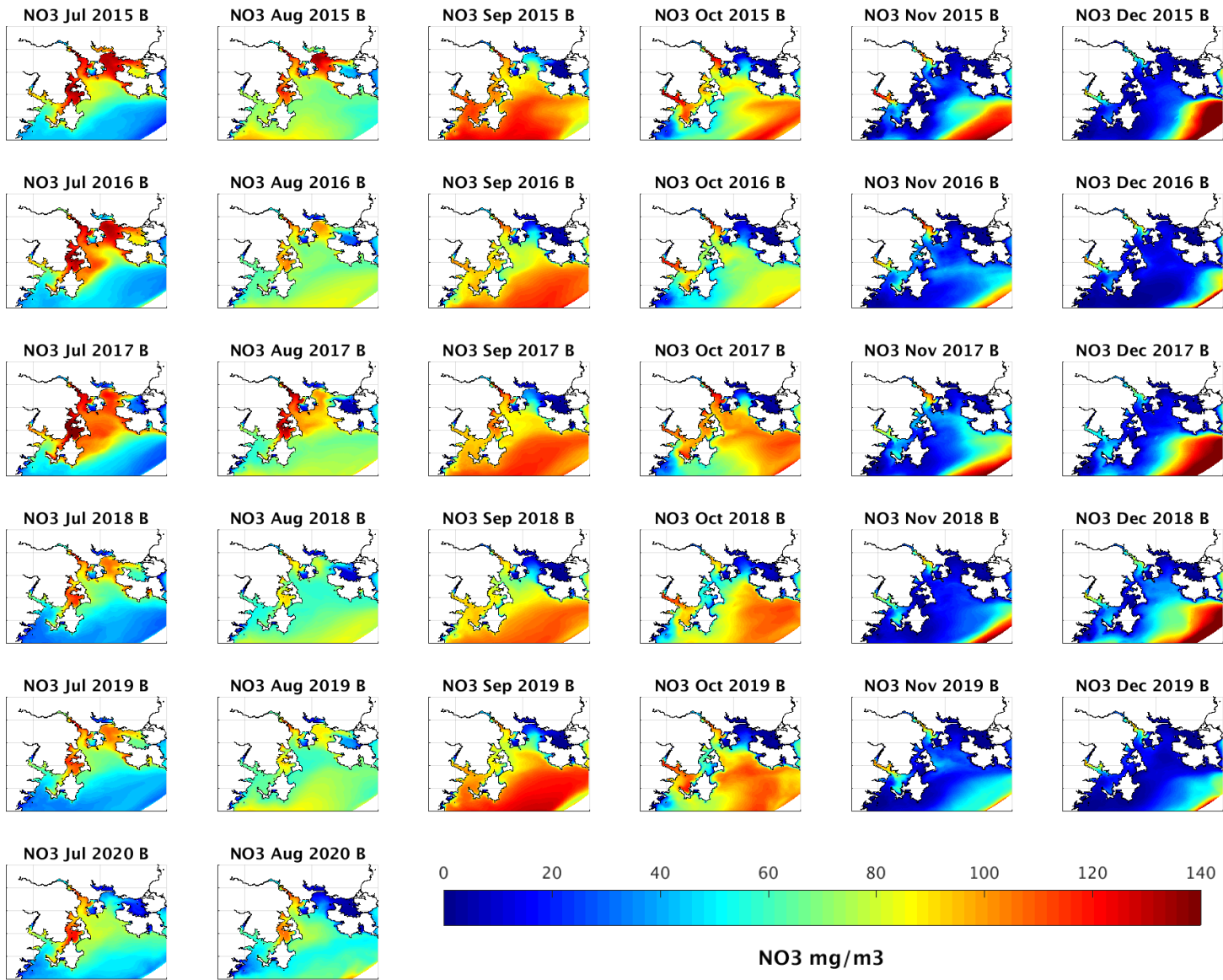


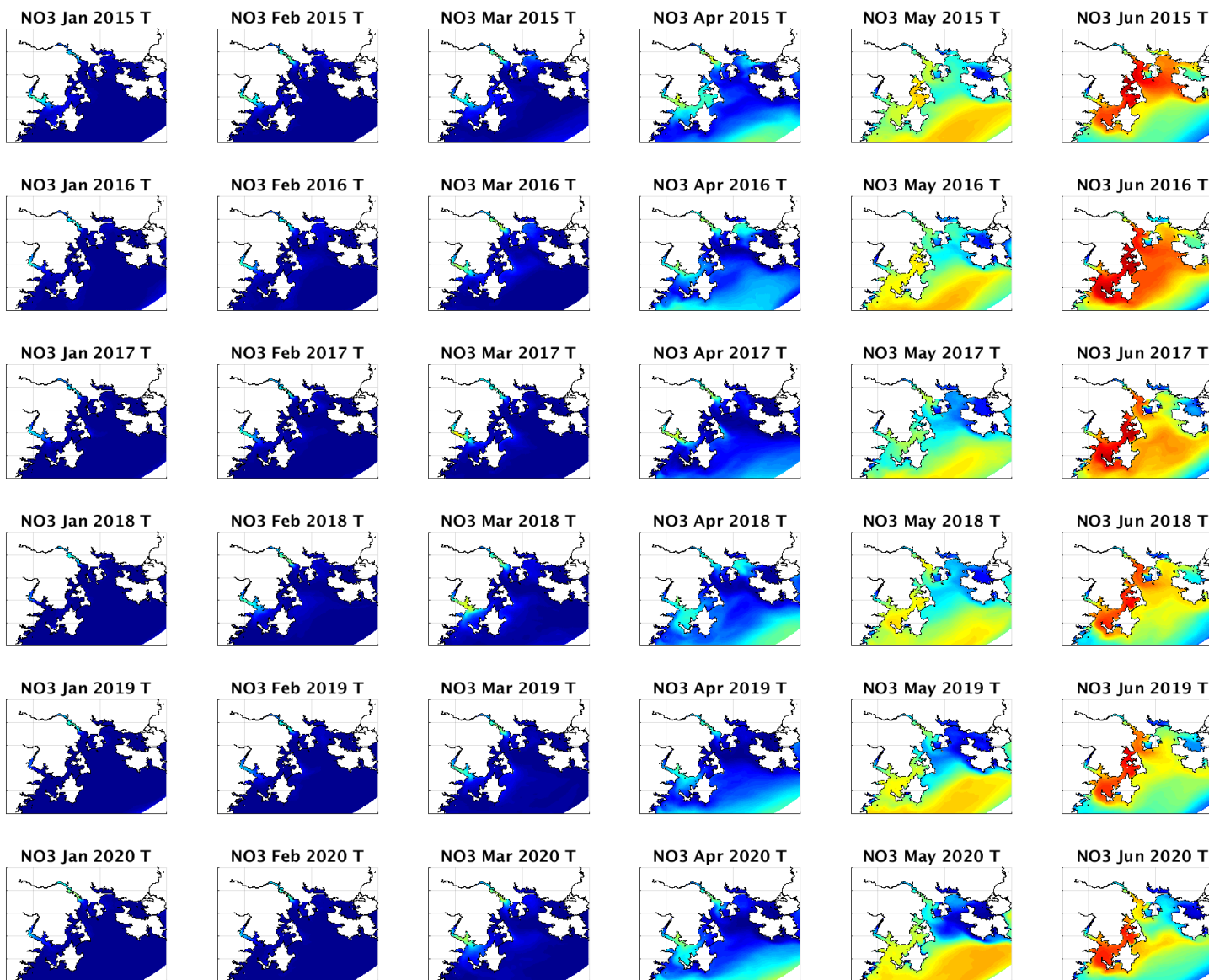


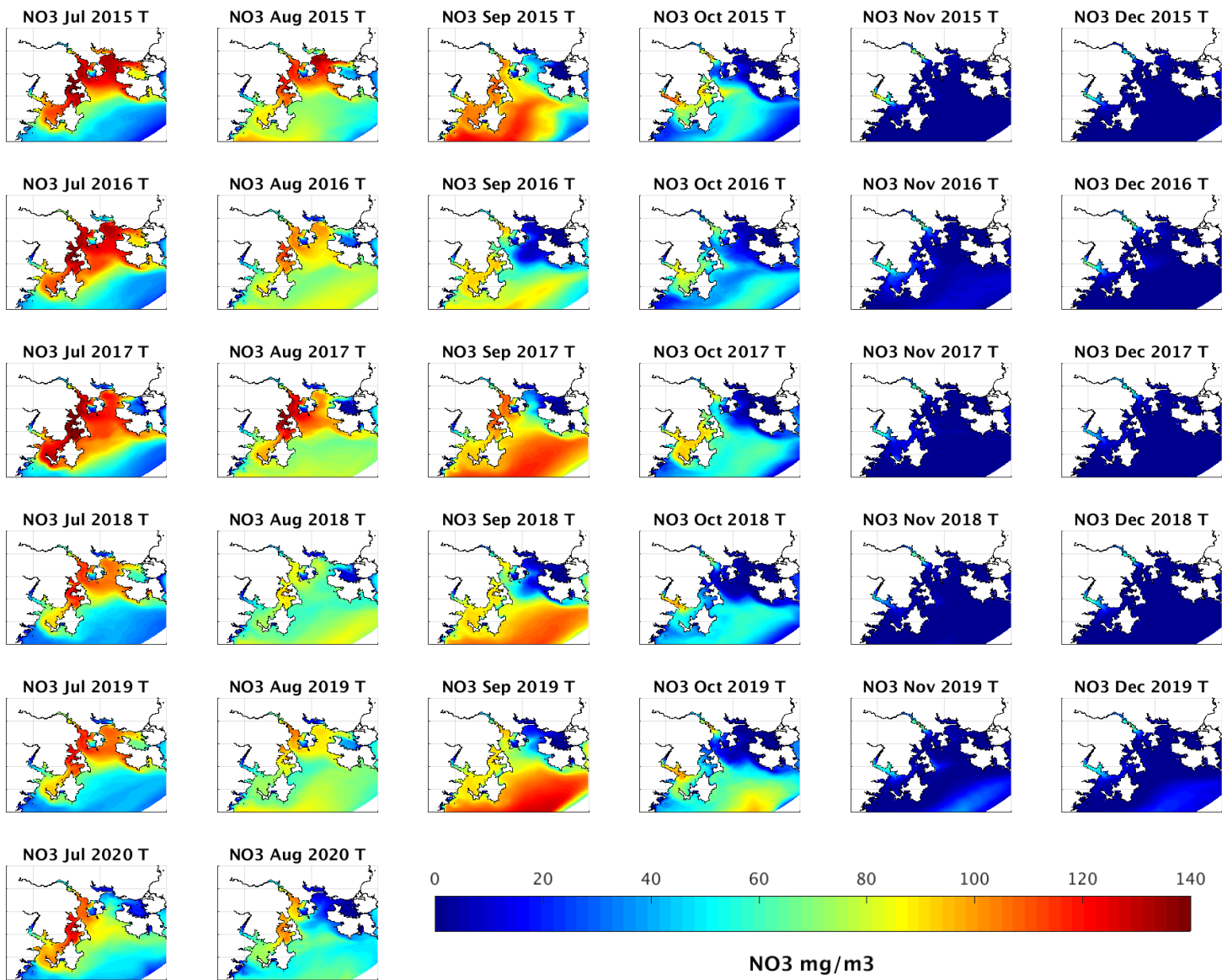


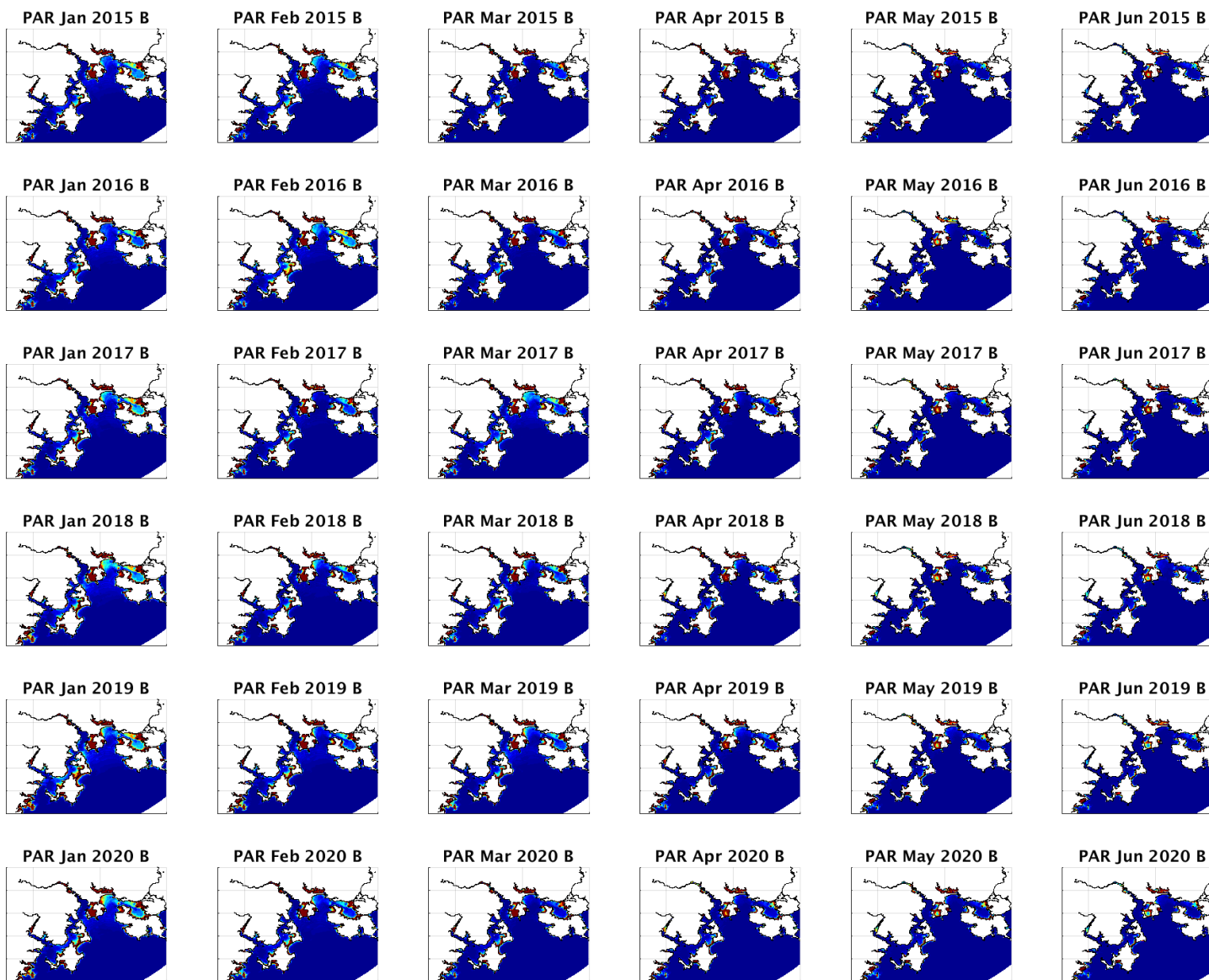


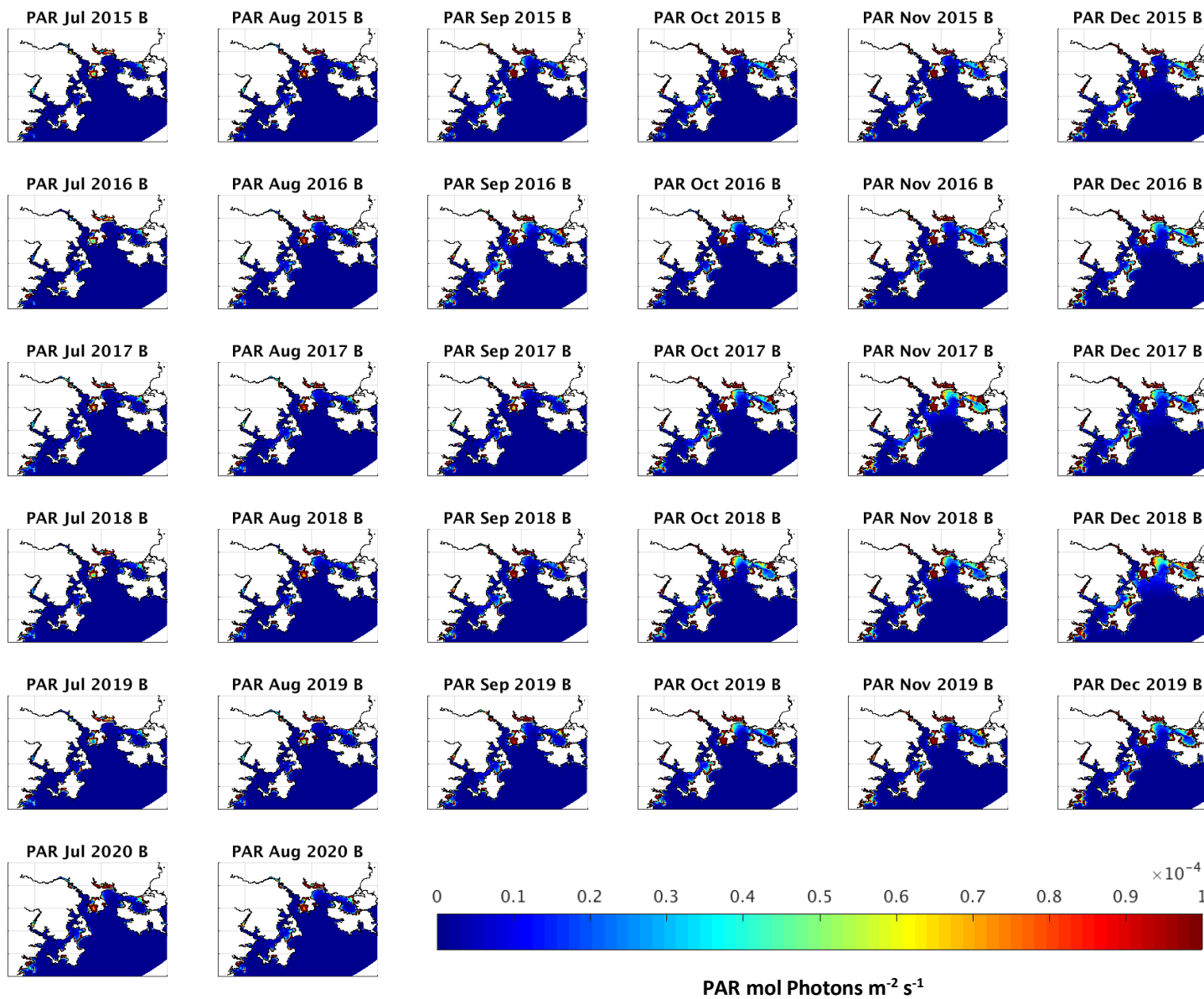


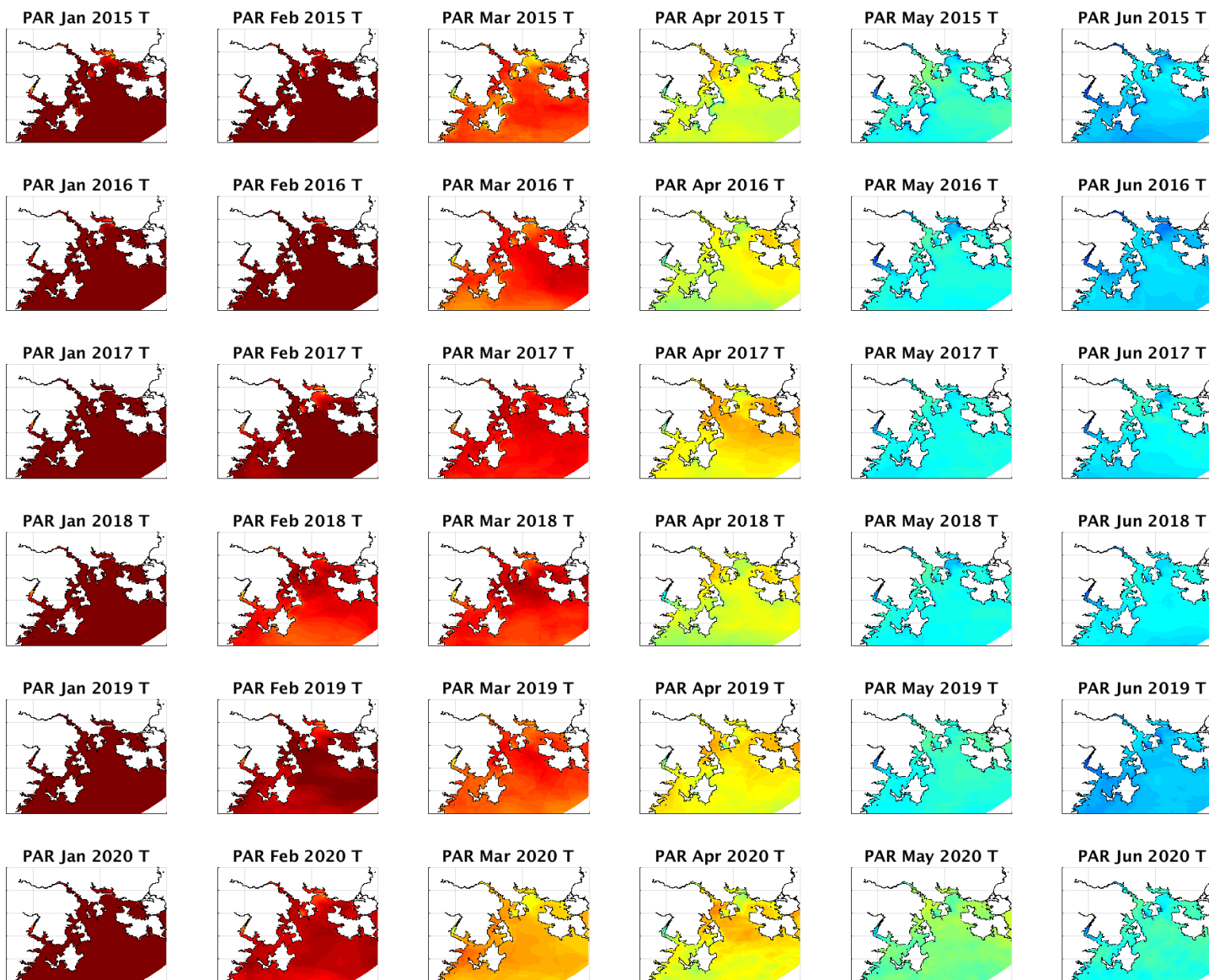


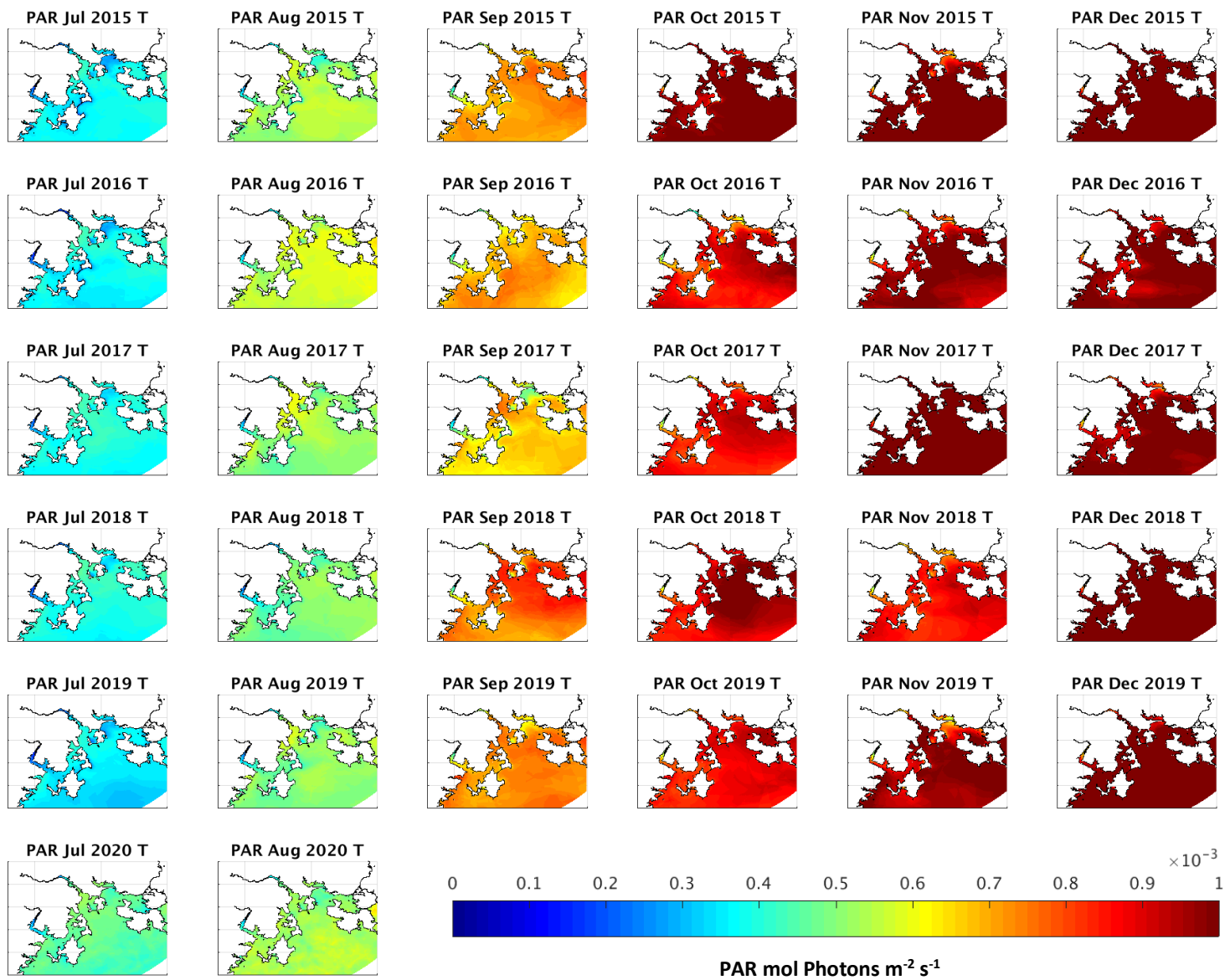


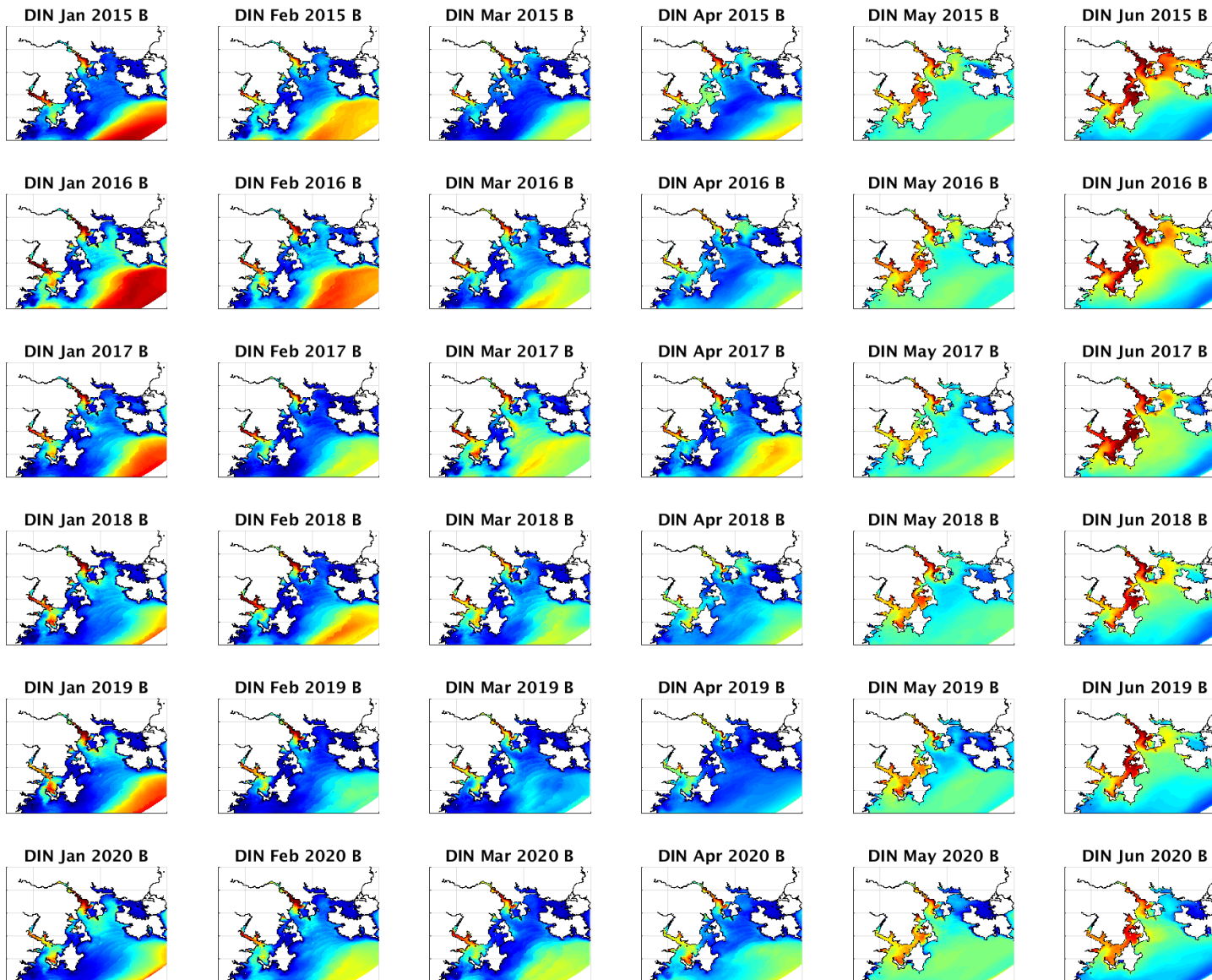




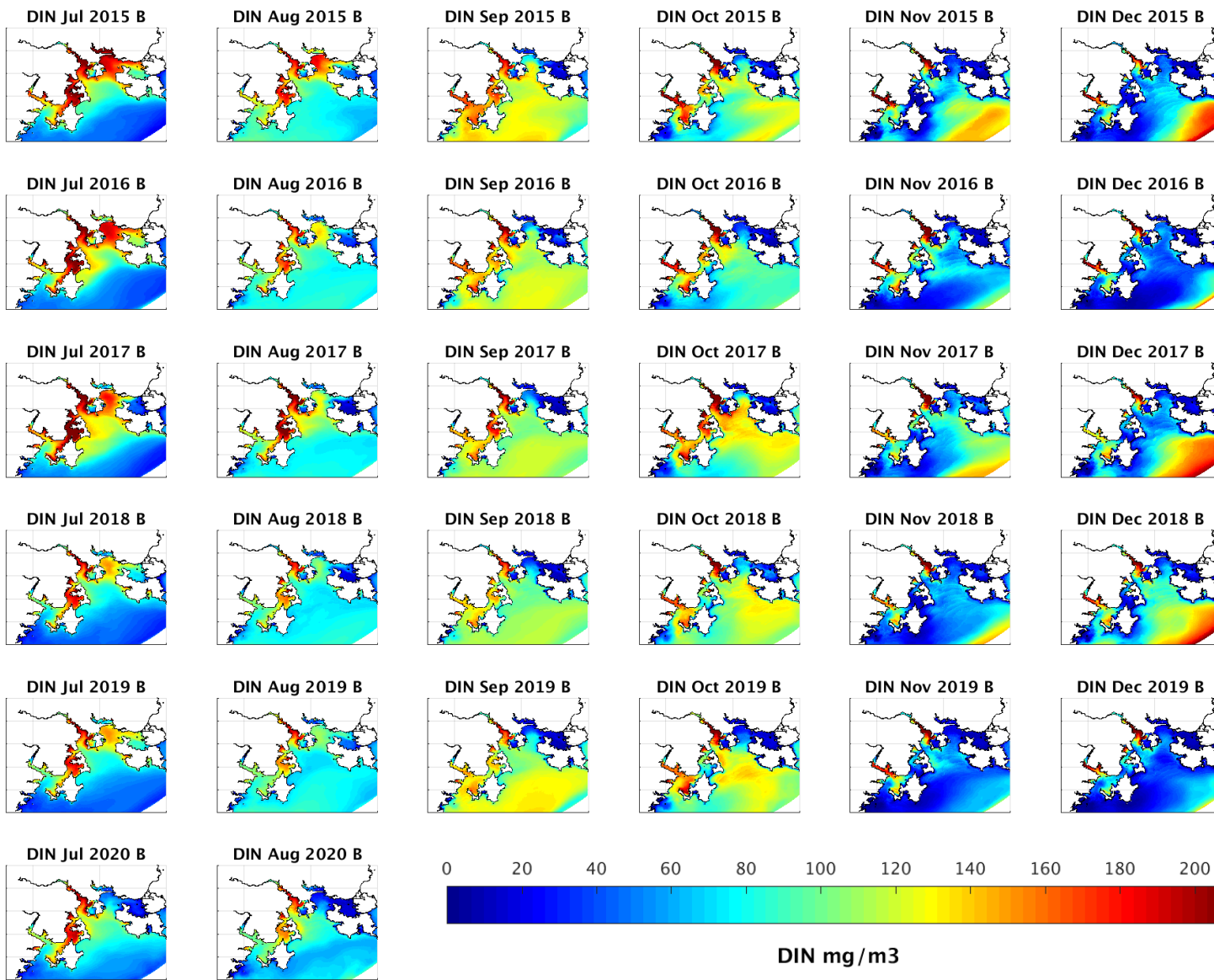


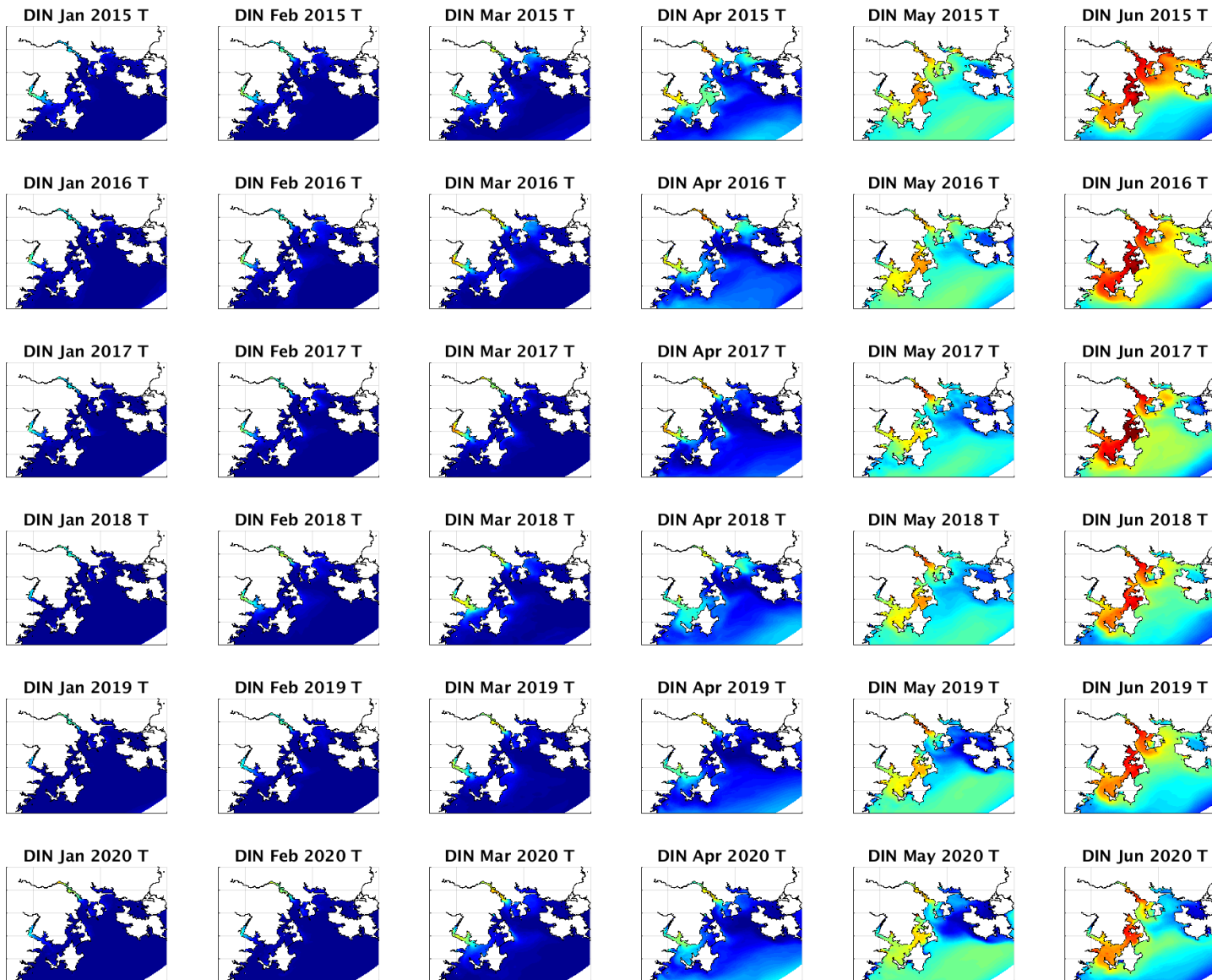


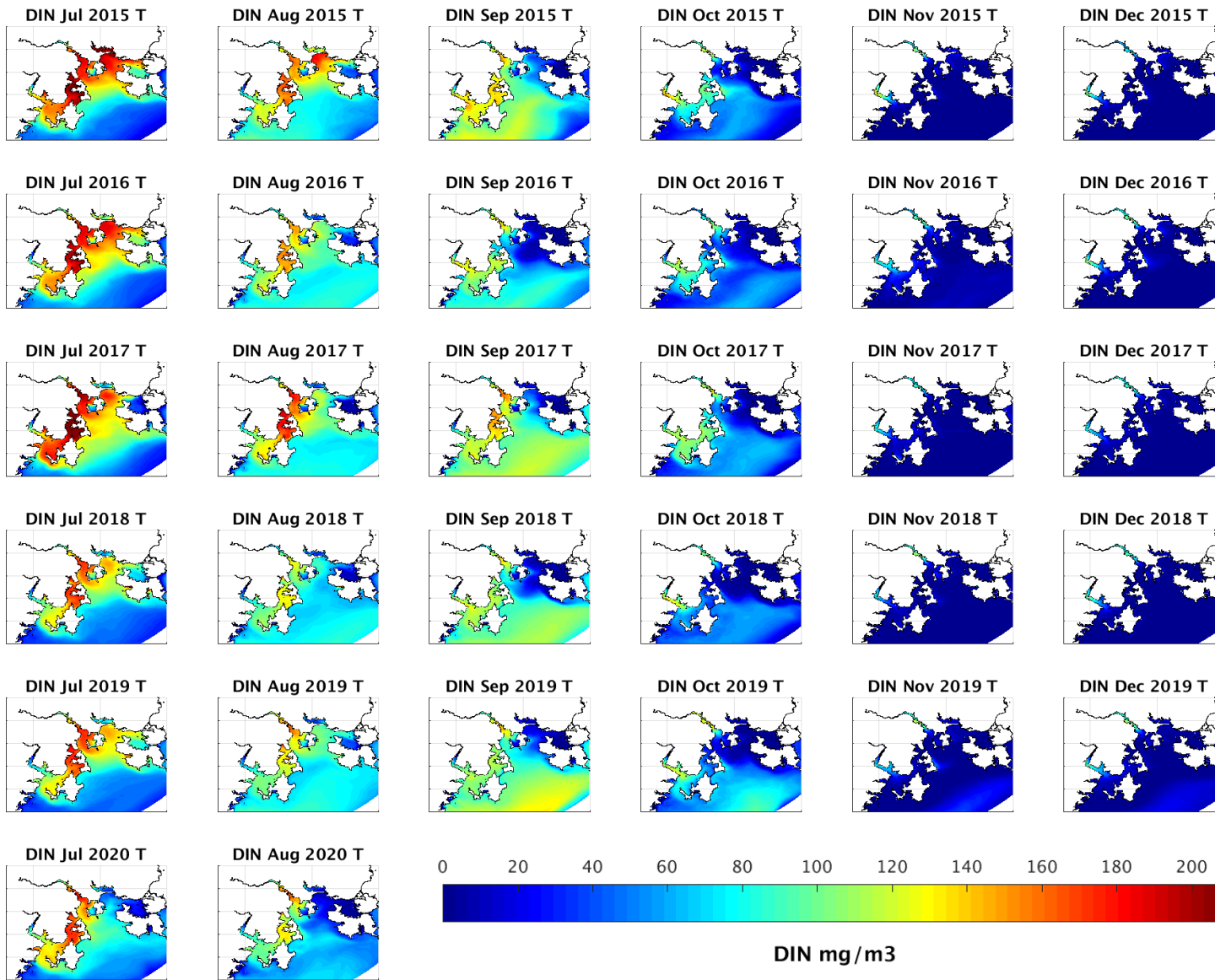












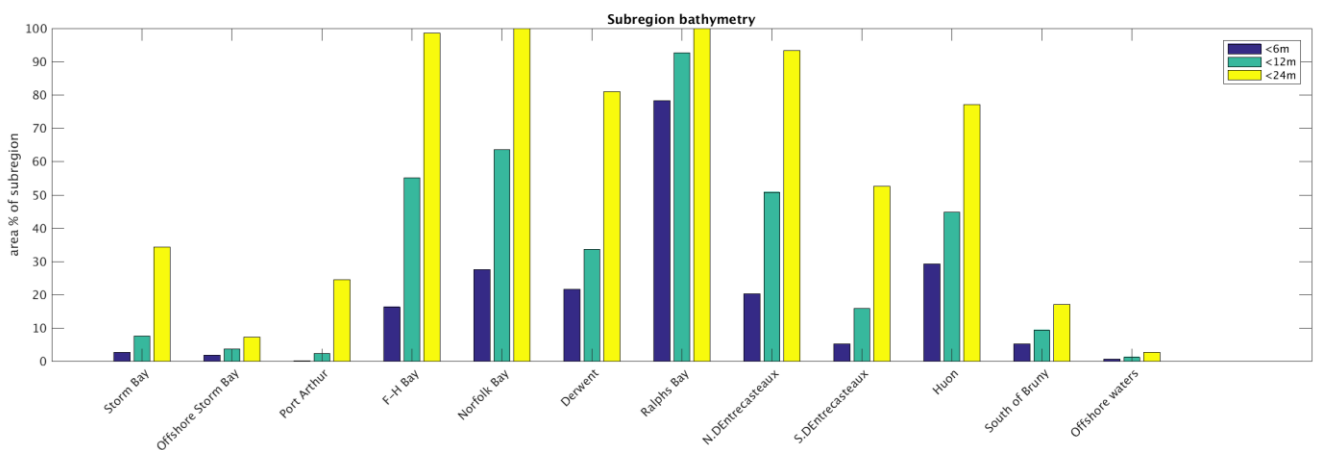
## A.8 Scenario simulation results and analysis

The following pages show figures of:

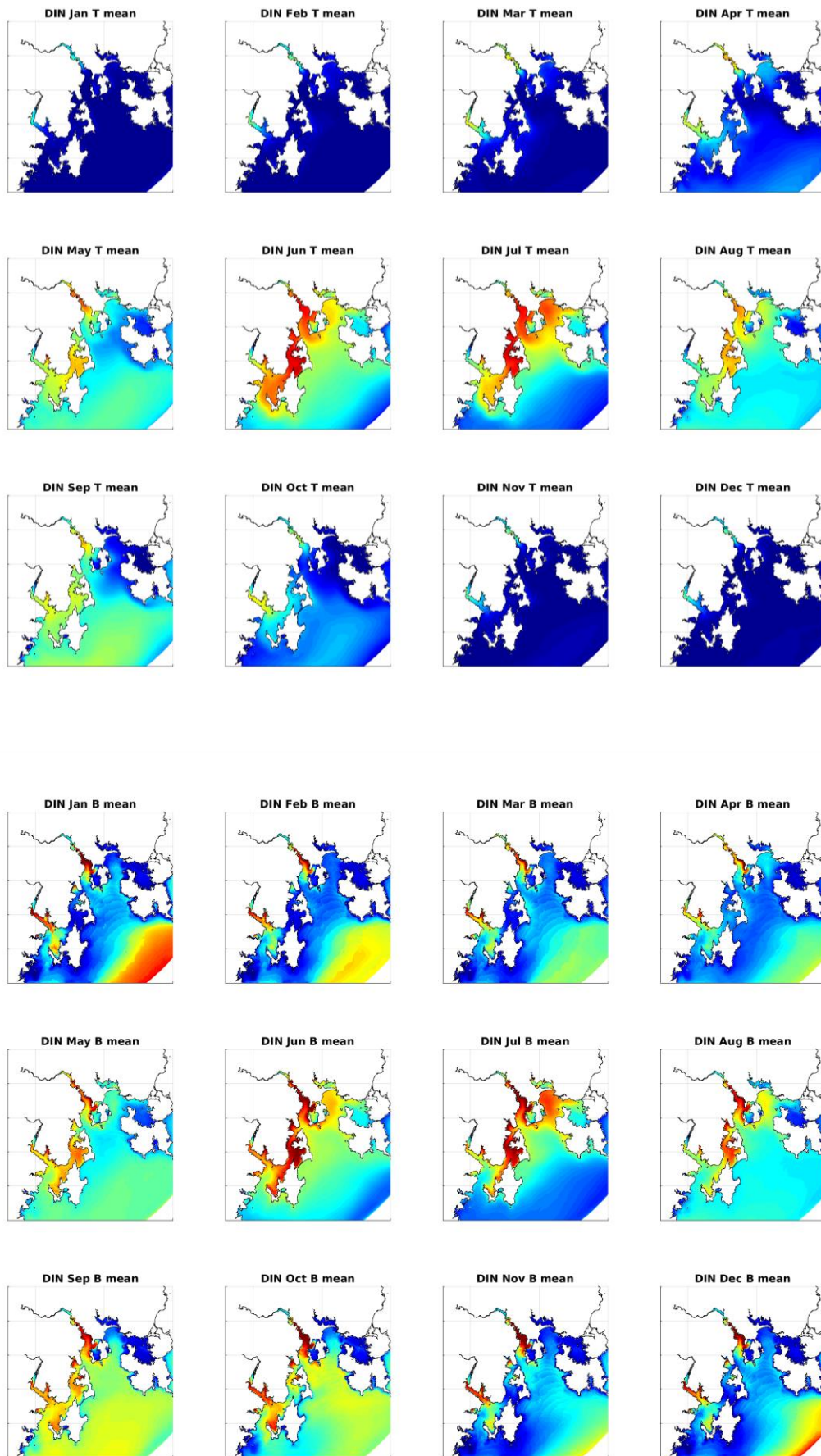
1. Scenario #3 Pre-Storm Bay (2015 sewerage, industry and 2013 fish farm nutrient loads) seasonal cycle of monthly mean spatial distributions of water properties from 2015-2019 for surface (T), bottom (B) or depth integrated (I) for chlorophyll. Scales and units are the same as in Appendix A.7 for corresponding substances.
2. Simulated seasonal cycle of monthly mean water properties for 2015-2019 along a 70km long transect crossing Storm Bay from inshore (left) to offshore (right) [vertical scale is 0 – 120 m depth].
3. Anomaly plots showing the difference in the seasonal cycle of monthly mean spatial and transect plots between each scenario and Scenario #3 Pre-Storm Bay (circa 2013) as detailed in Table A8.1. Scale is in % change.
4. Anomaly plots showing the difference in the seasonal cycle of monthly mean spatial and transect plots between each scenario and Scenario #3 Pre-Storm Bay (circa 2013) as detailed in Table A8.1. Scale is in absolute change.
5. Seasonal variation in water quality for model sub-regions (Figure A7.1). Box plot shows mean, 25th and 75th percentiles and range for all model cells in each sub-region for 2015-2019; for light transmission the % area where bottom PAR exceeds 1% surface light is shown [note that each region has a different area of shallow water (Figure A8.1)].
6. Seasonal variation in water quality at monitoring sites throughout the region for each model scenario. Box plots shows mean, 25<sup>th</sup> and 75<sup>th</sup> percentiles and range over 2015-2019 in surface waters (top panel) and bottom\* waters (bottom panel). [\*depth averaged chlorophyll 0-12m]. EPA Default Guideline Values for Bruny Bioregion OSRA segments corresponding to sites in Storm Bay are shown in pink. See report for a perspective on this preliminary analysis.

**Table A8.1 Anomaly calculations between model simulations to rapidly identify differences in water quality resulting from each scenario.**

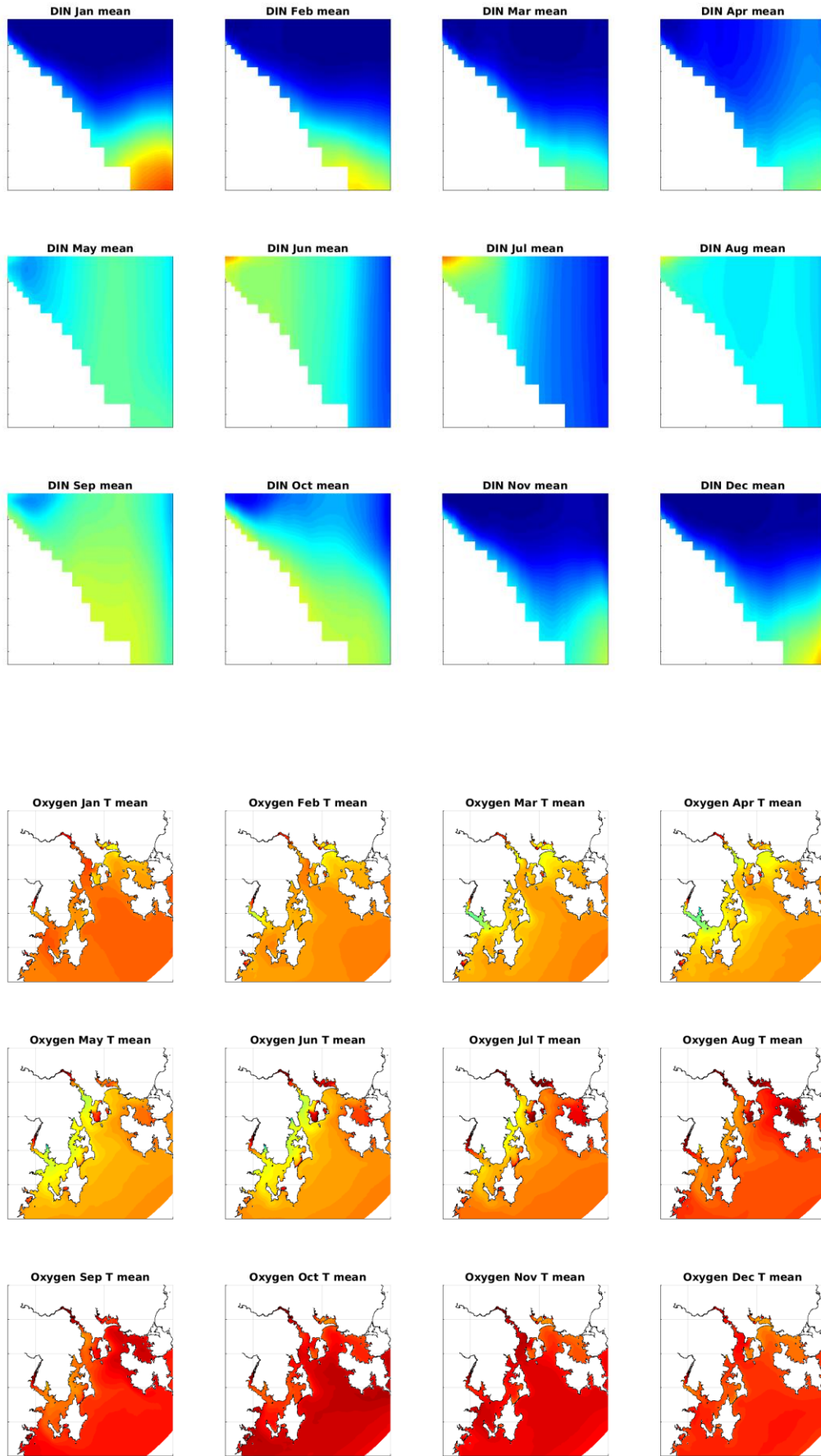
Hindcast simulation #1 – Pre-SB (c.2013) #3	=	Progressive impact of recent anthropogenic loads on WQ since circa 2013
Pre-development #2 – Pre-SB (c.2013) #3	=	Impact of anthropogenic loads surrounding Storm Bay (circa 2013) on WQ
Post-development: 2020+2ktN in SB #4 – Pre-SB (c.2013) #3	=	Impact of 2020 STP, Industry, Fish Farms, +2ktN load in SB, on WQ since 2013
Post-development: 2020+3ktN in SB #4.5 – Pre-SB (c.2013) #3	=	Impact of 2020 STP, Industry, Fish Farms, +3ktN load in SB, on WQ since 2013
Post-development: 2020+4.5ktN in SB #5 – Pre-SB (c.2013) #3	=	Impact of 2020 STP, Industry, Fish Farms, +4.5ktN load in SB, on WQ since 2013



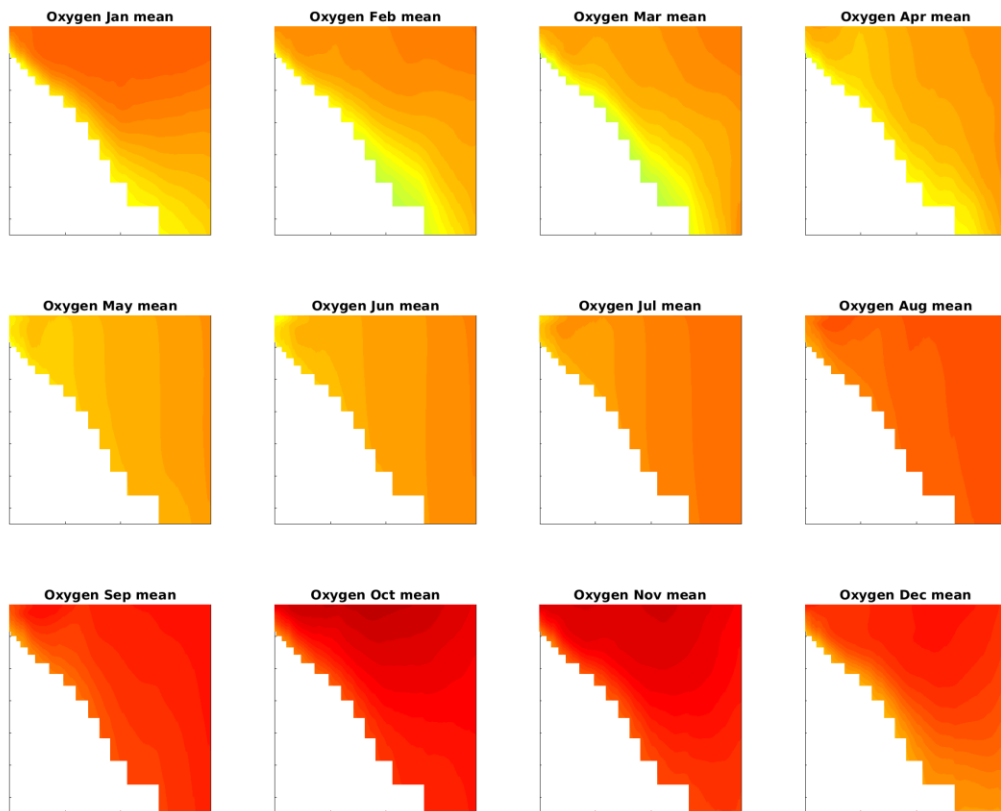
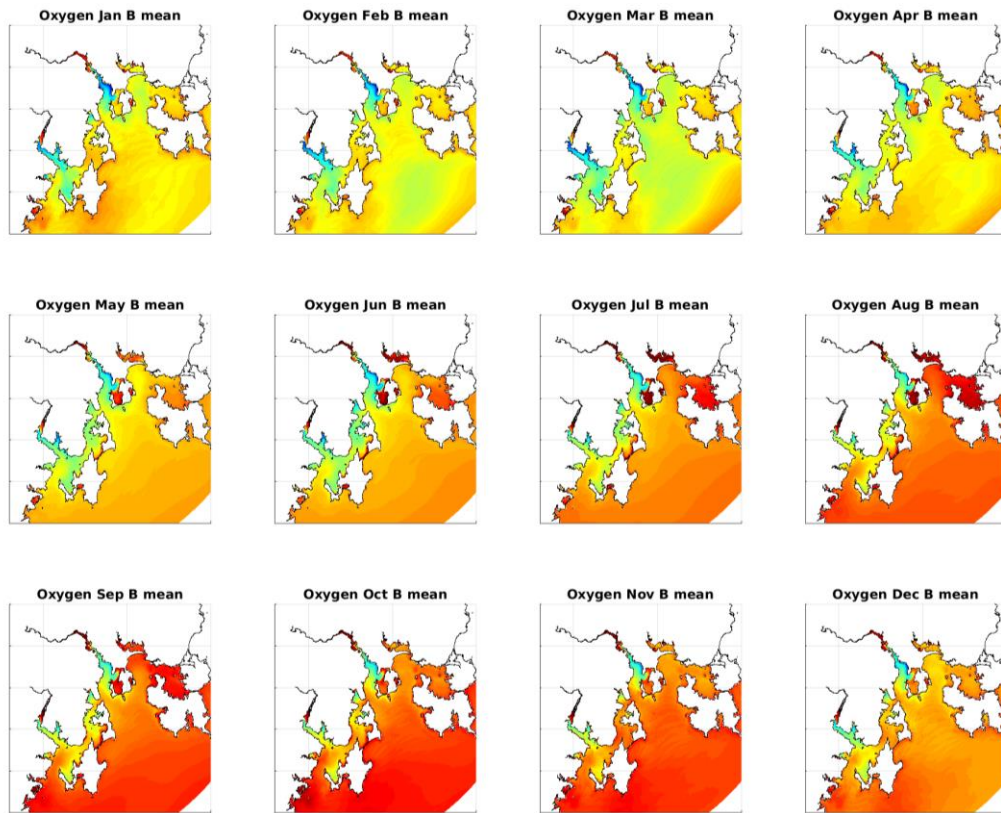
**Figure A8.1 Area of shallow water in each model sub-region (% of sub-region area).**



Scenario #3 Pre-Storm Bay (2015 sewerage, industry and 2013 fish farm nutrient loads)

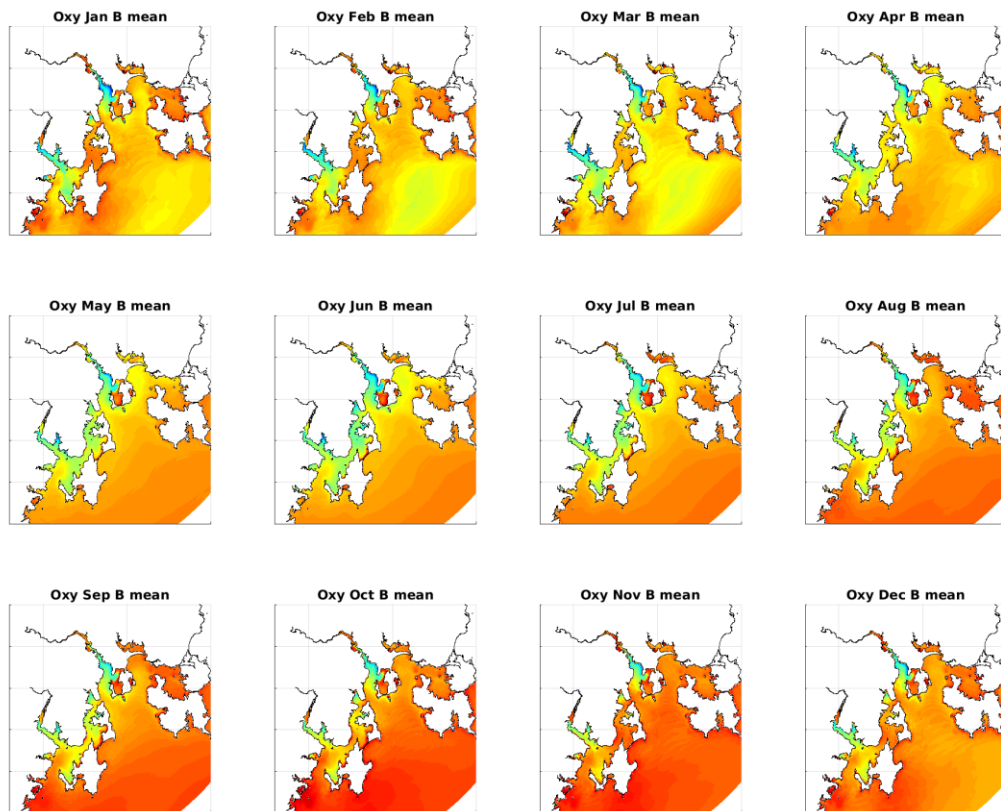
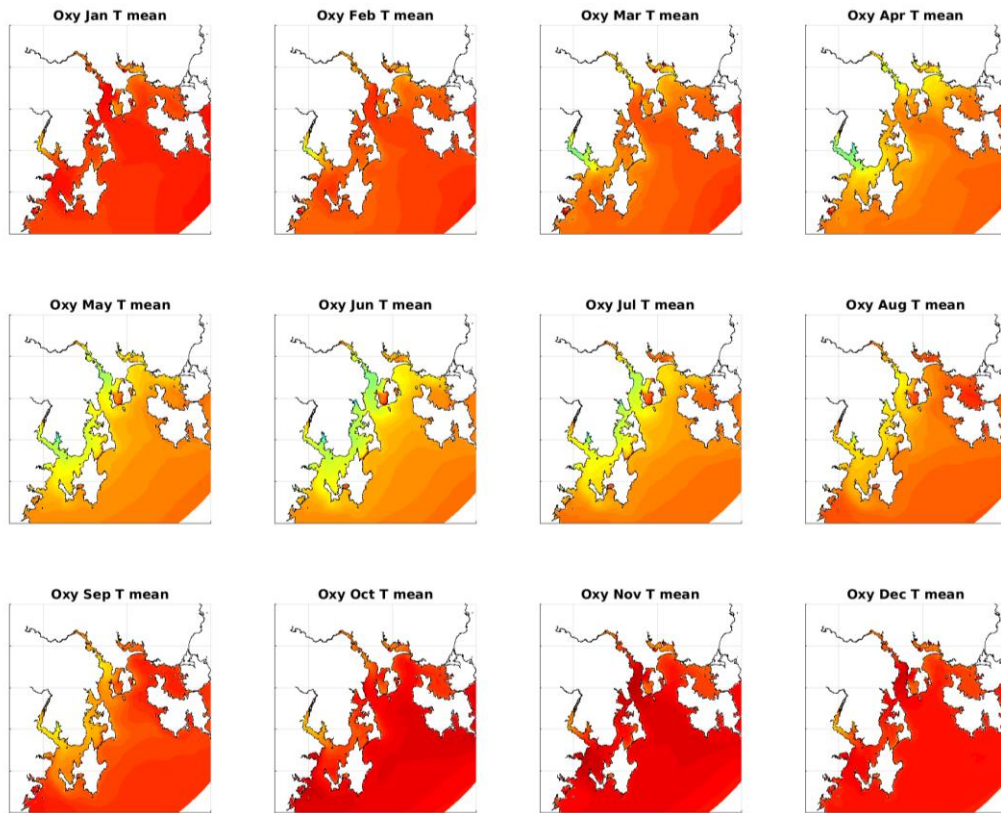


Scenario #3 Pre-Storm Bay (2015 sewerage, industry and 2013 fish farm nutrient loads)

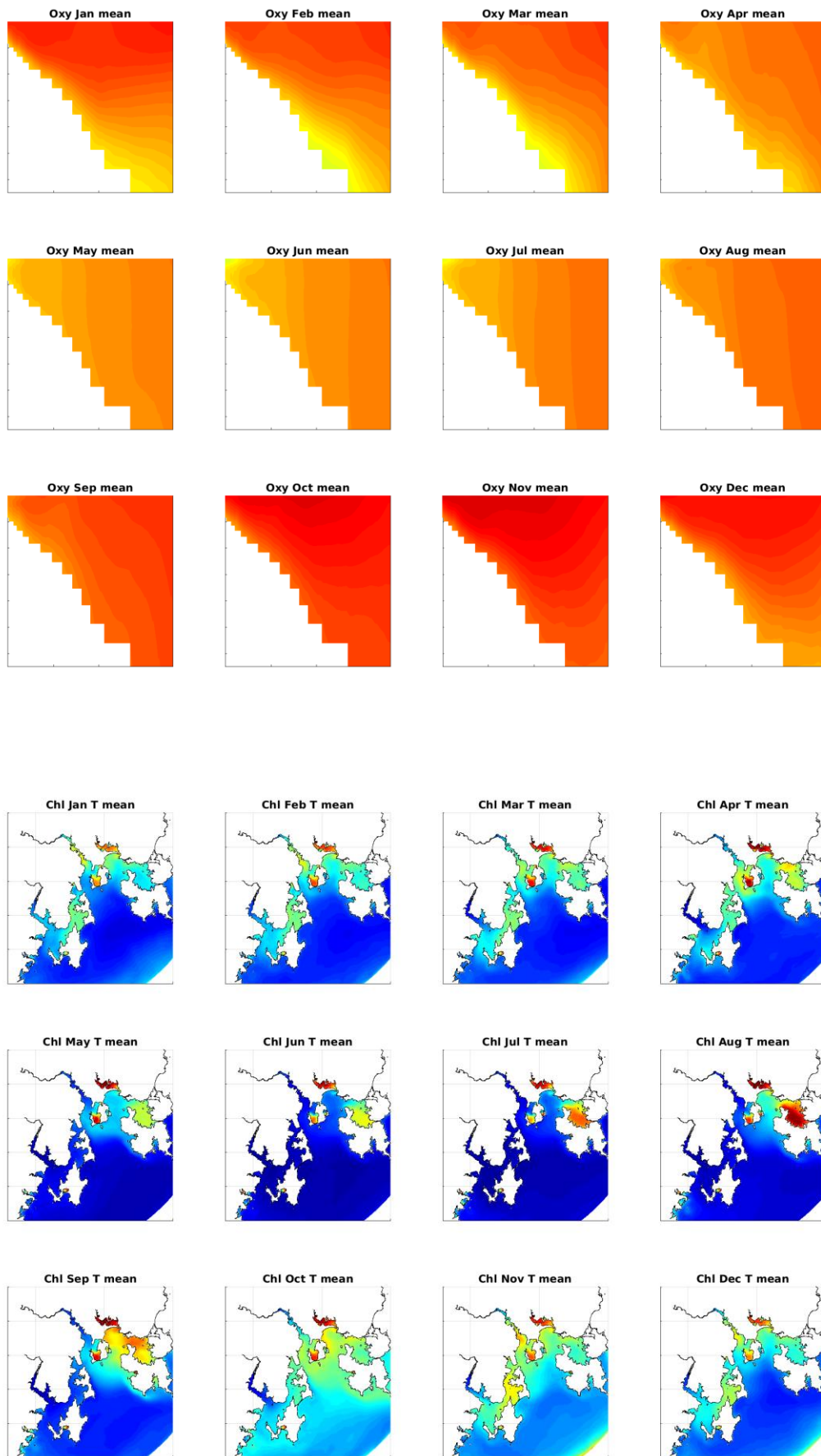


Scenario #3 Pre-Storm Bay (2015 sewerage, industry and 2013 fish farm nutrient loads)

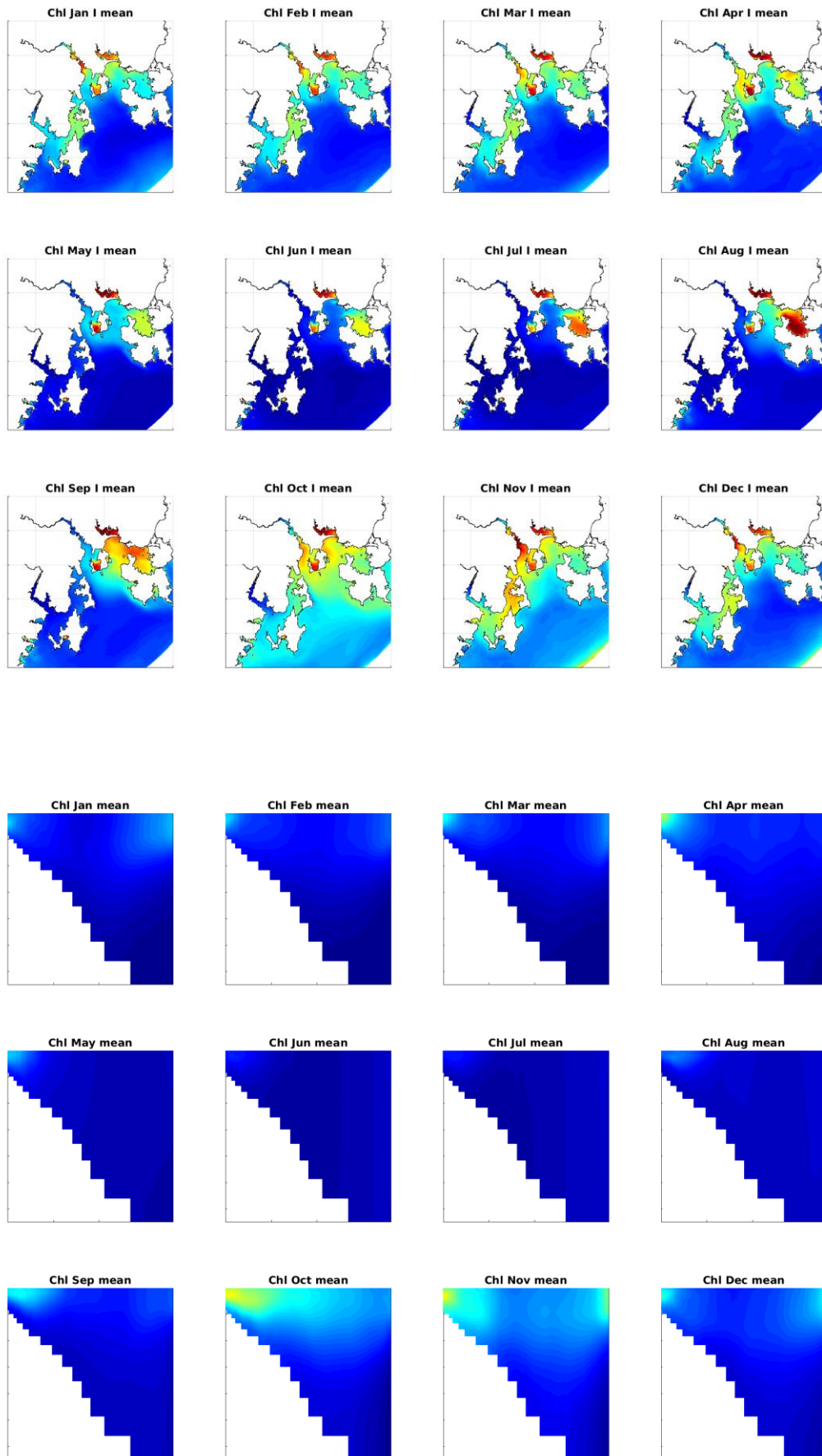




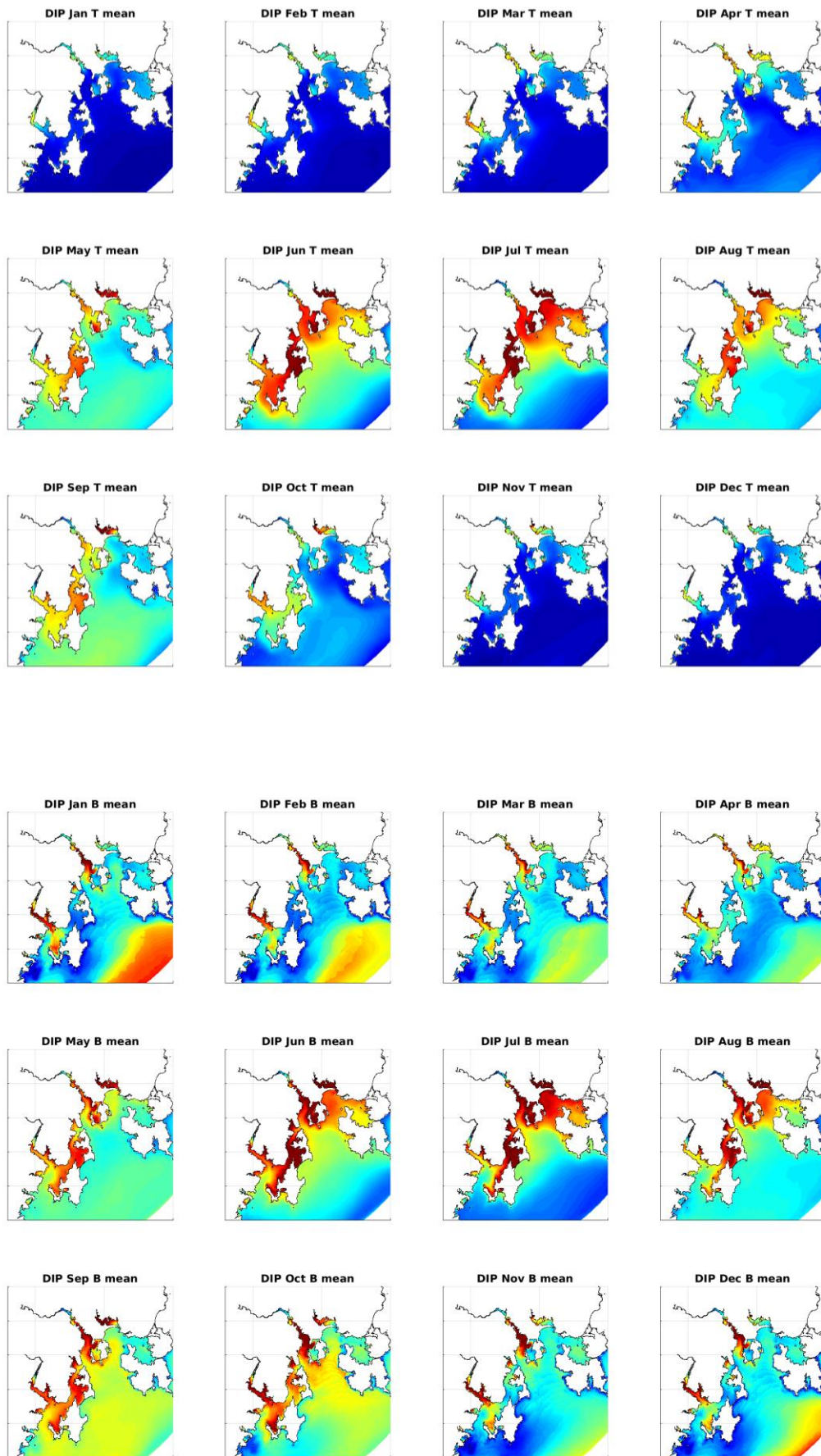
Scenario #3 Pre-Storm Bay (2015 sewerage, industry and 2013 fish farm nutrient loads)



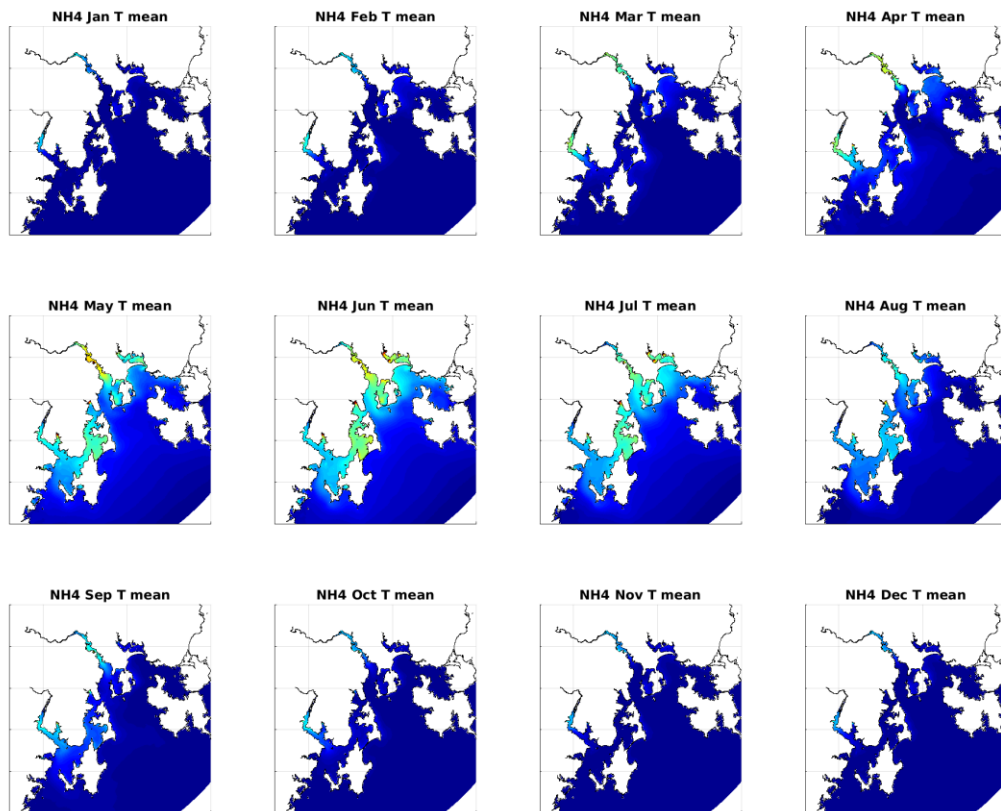
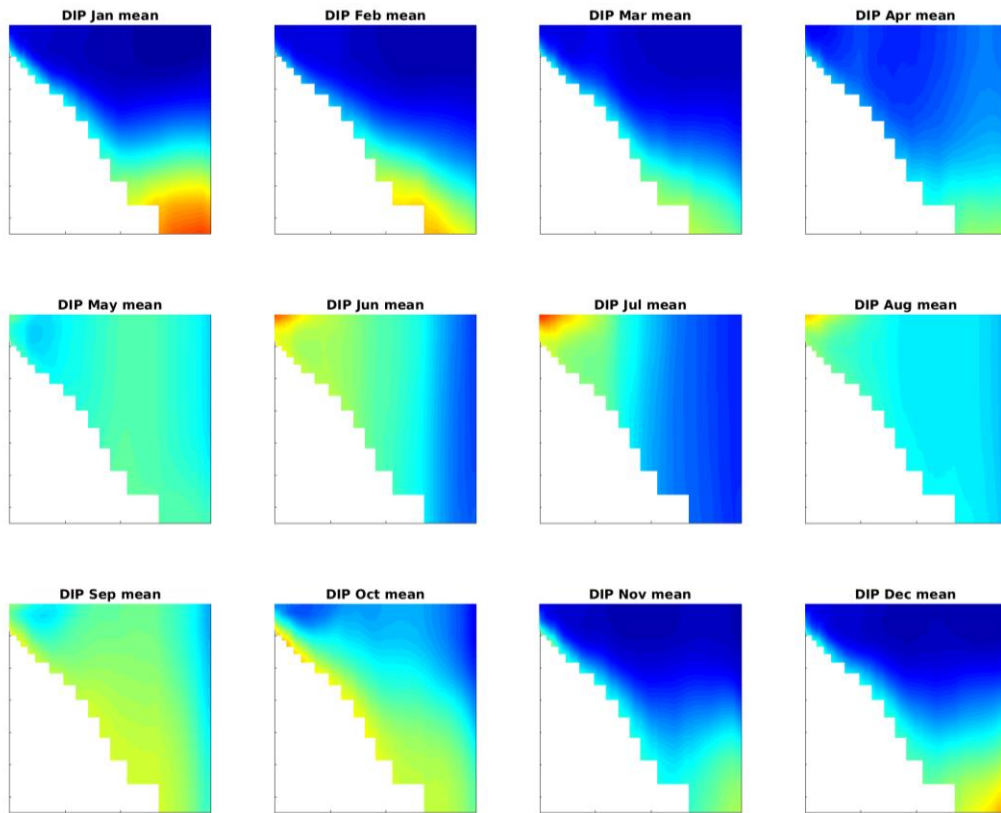
Scenario #3 Pre-Storm Bay (2015 sewerage, industry and 2013 fish farm nutrient loads)



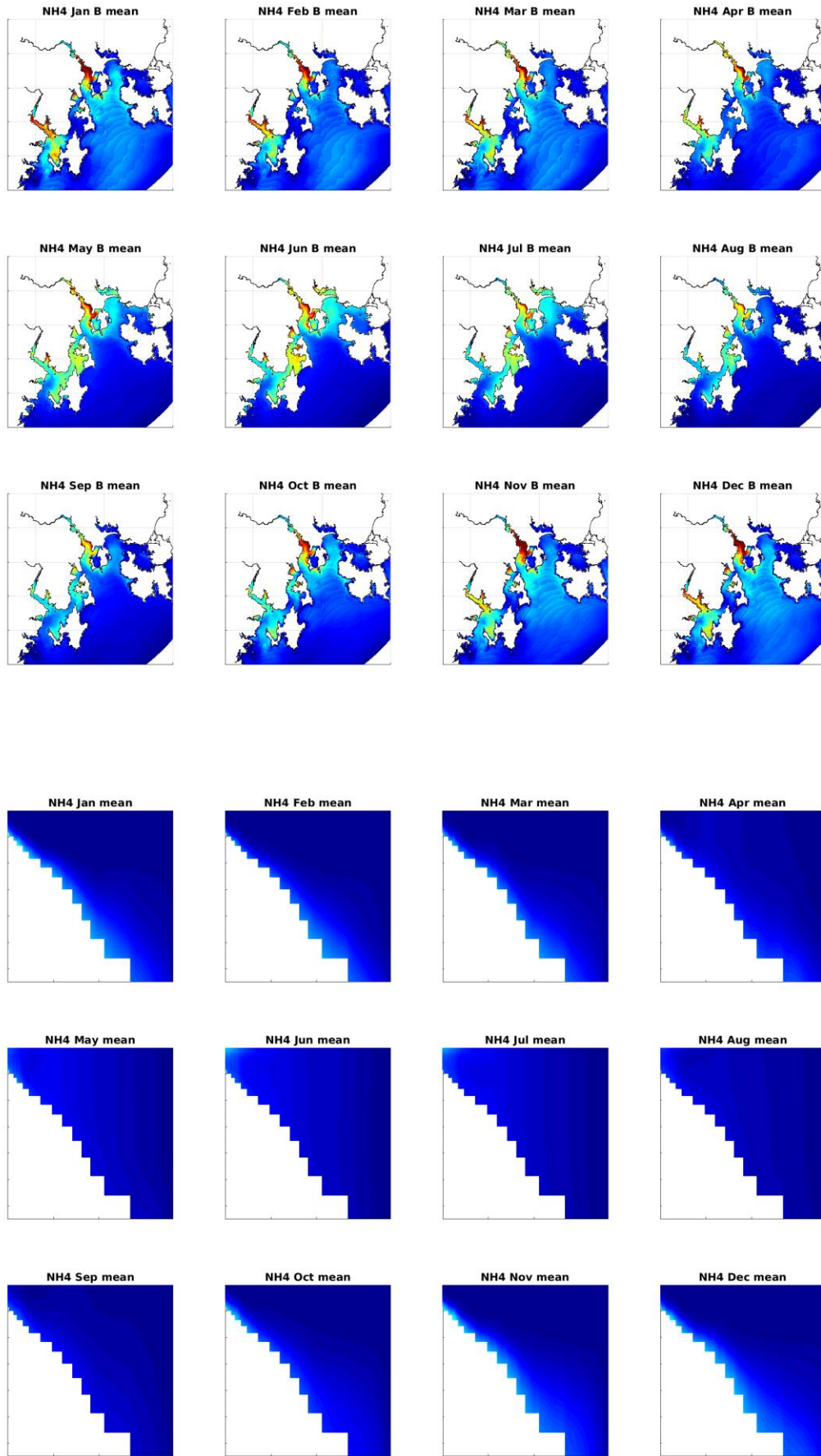
Scenario #3 Pre-Storm Bay (2015 sewerage, industry and 2013 fish farm nutrient loads)



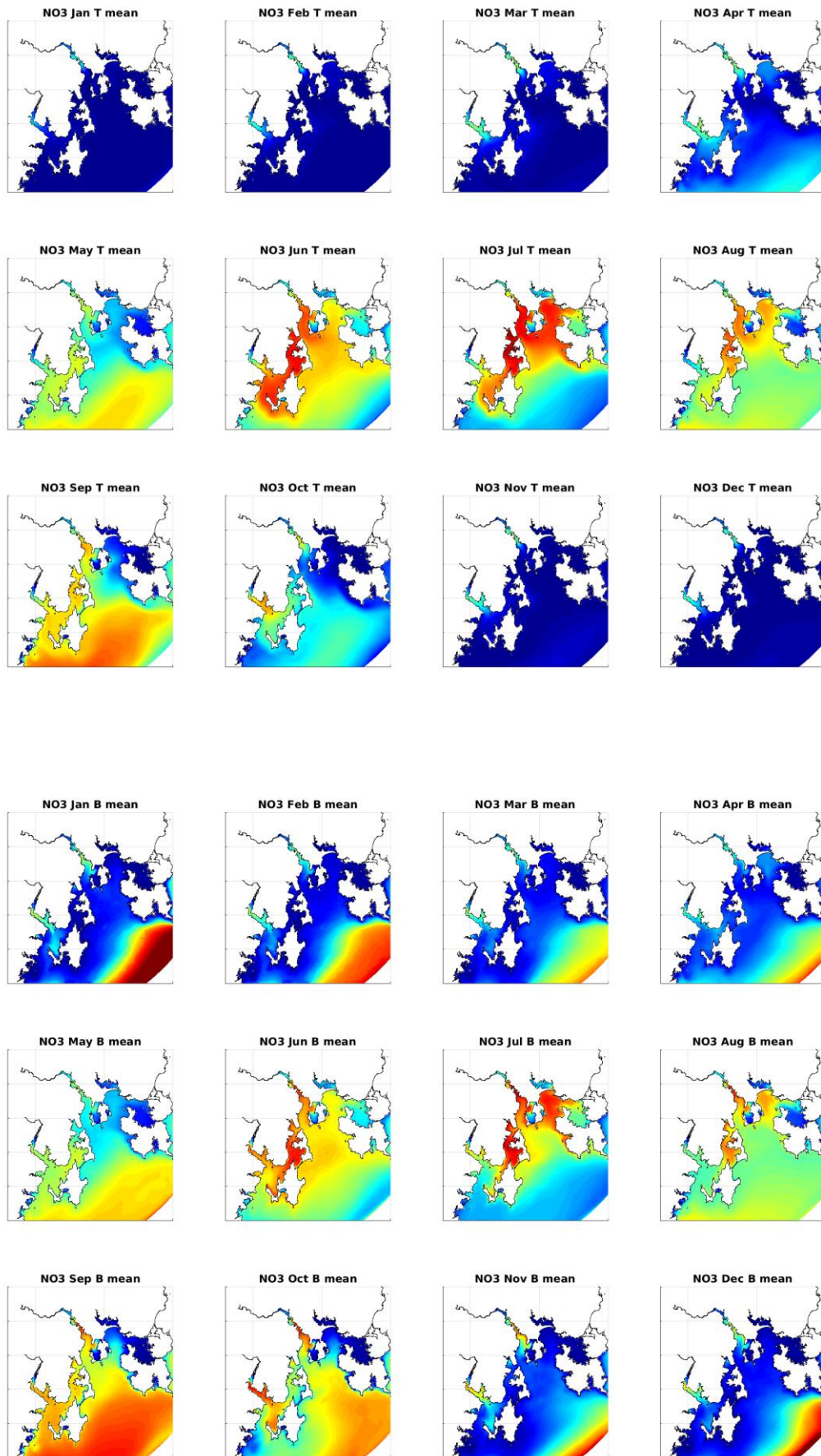
Scenario #3 Pre-Storm Bay (2015 sewerage, industry and 2013 fish farm nutrient loads)



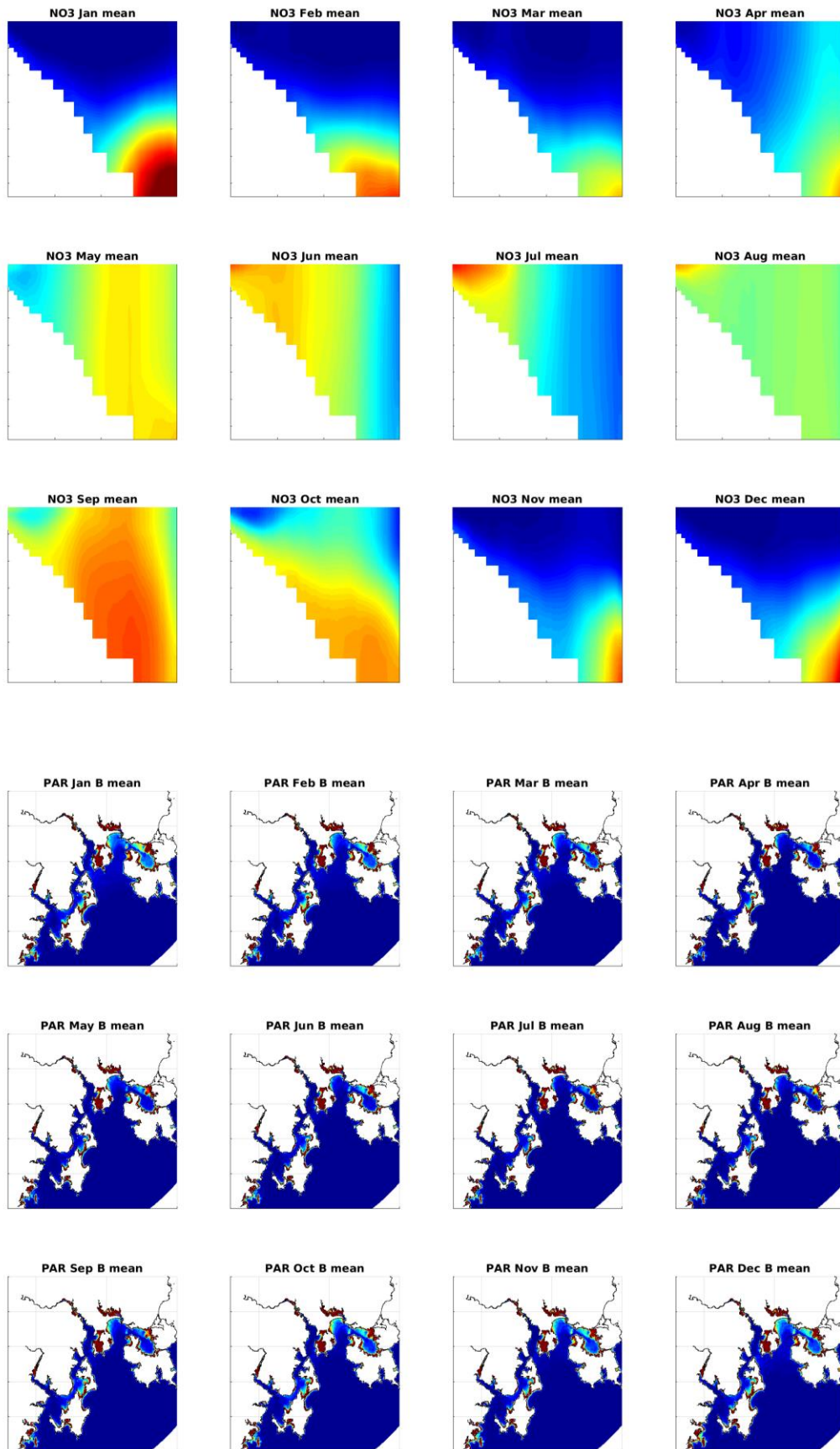
Scenario #3 Pre-Storm Bay (2015 sewerage, industry and 2013 fish farm nutrient loads)



Scenario #3 Pre-Storm Bay (2015 sewerage, industry and 2013 fish farm nutrient loads)

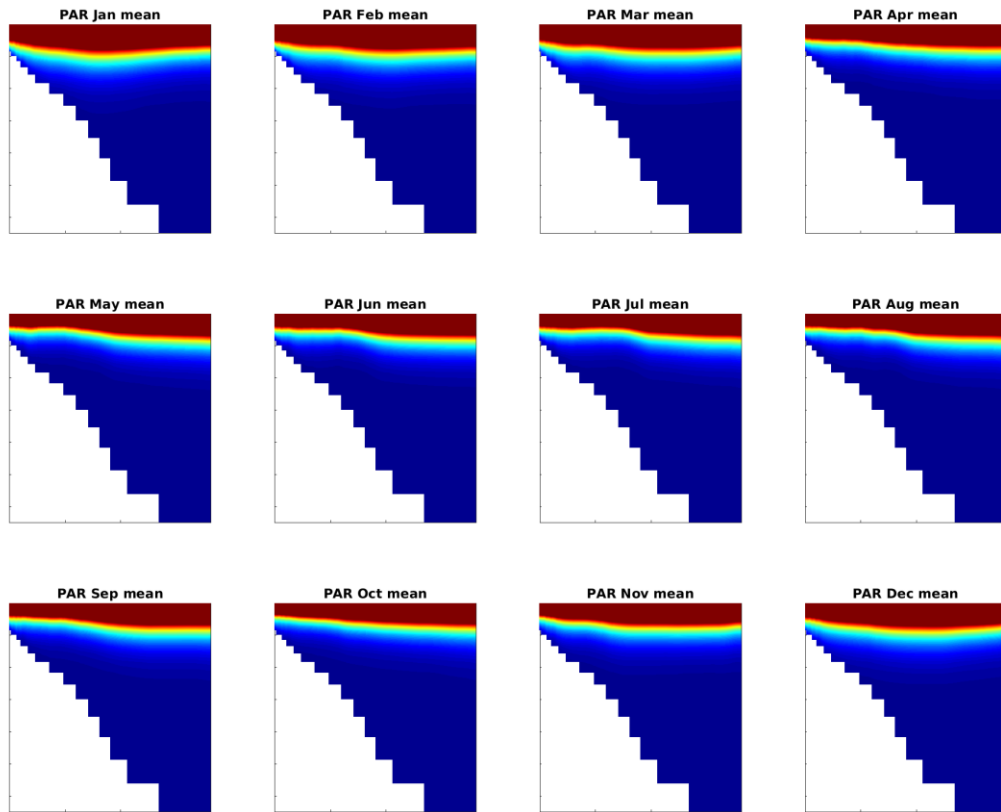


Scenario #3 Pre-Storm Bay (2015 sewerage, industry and 2013 fish farm nutrient loads)

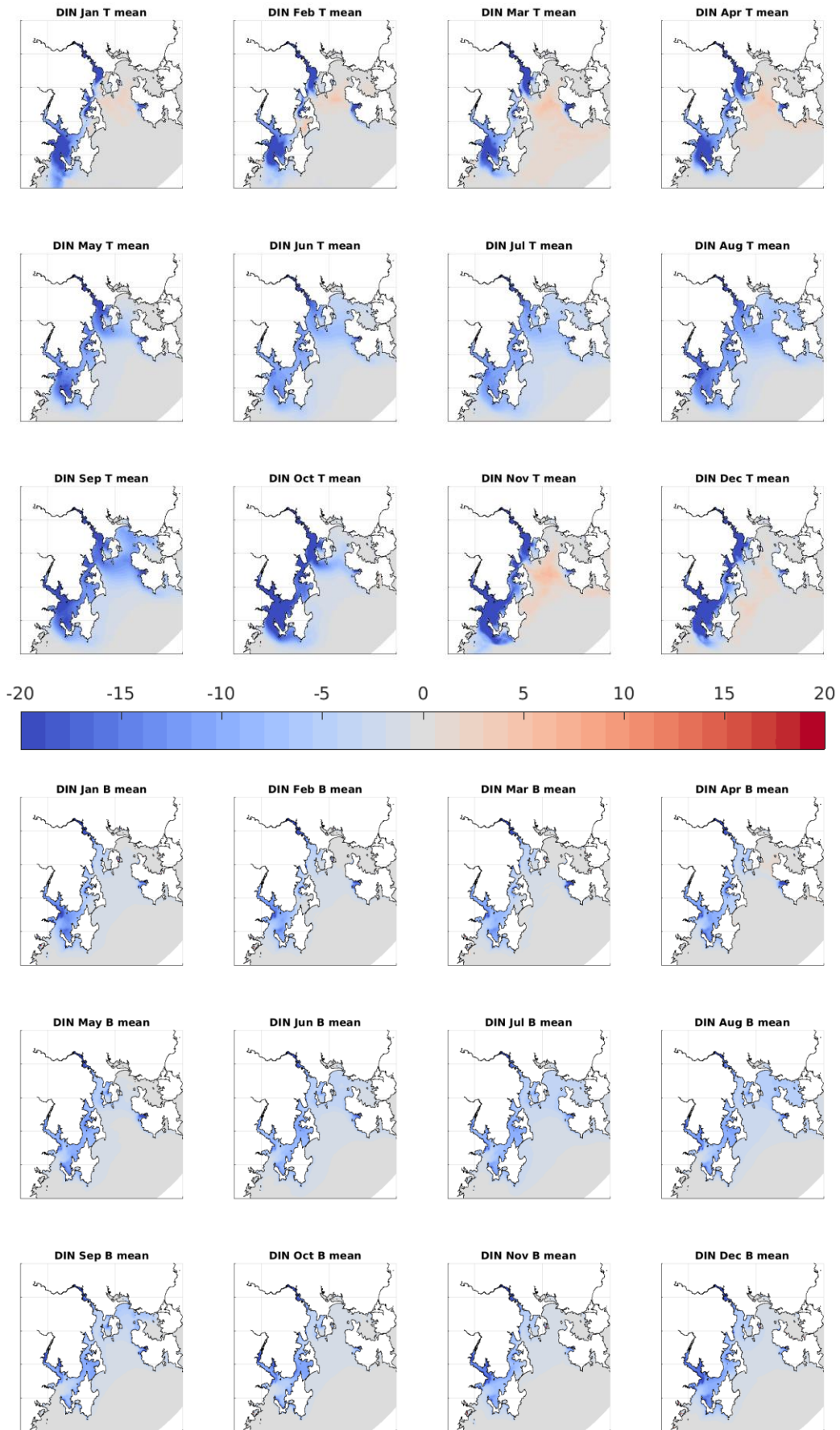


Scenario #3 Pre-Storm Bay (2015 sewerage, industry and 2013 fish farm nutrient loads)

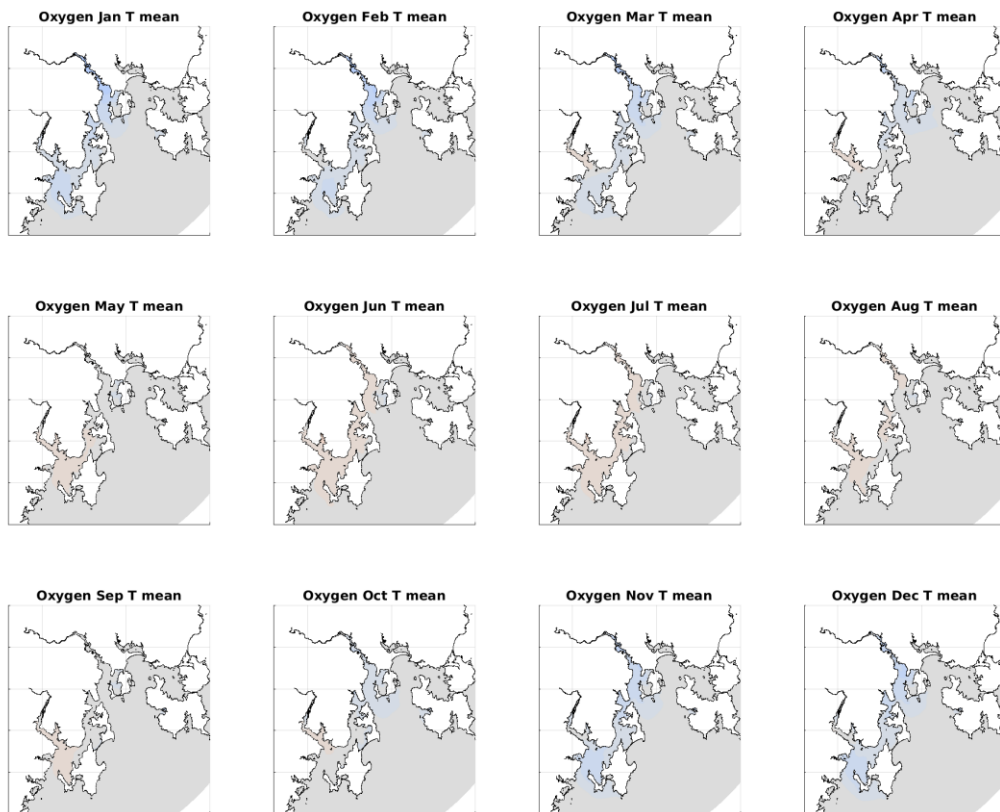
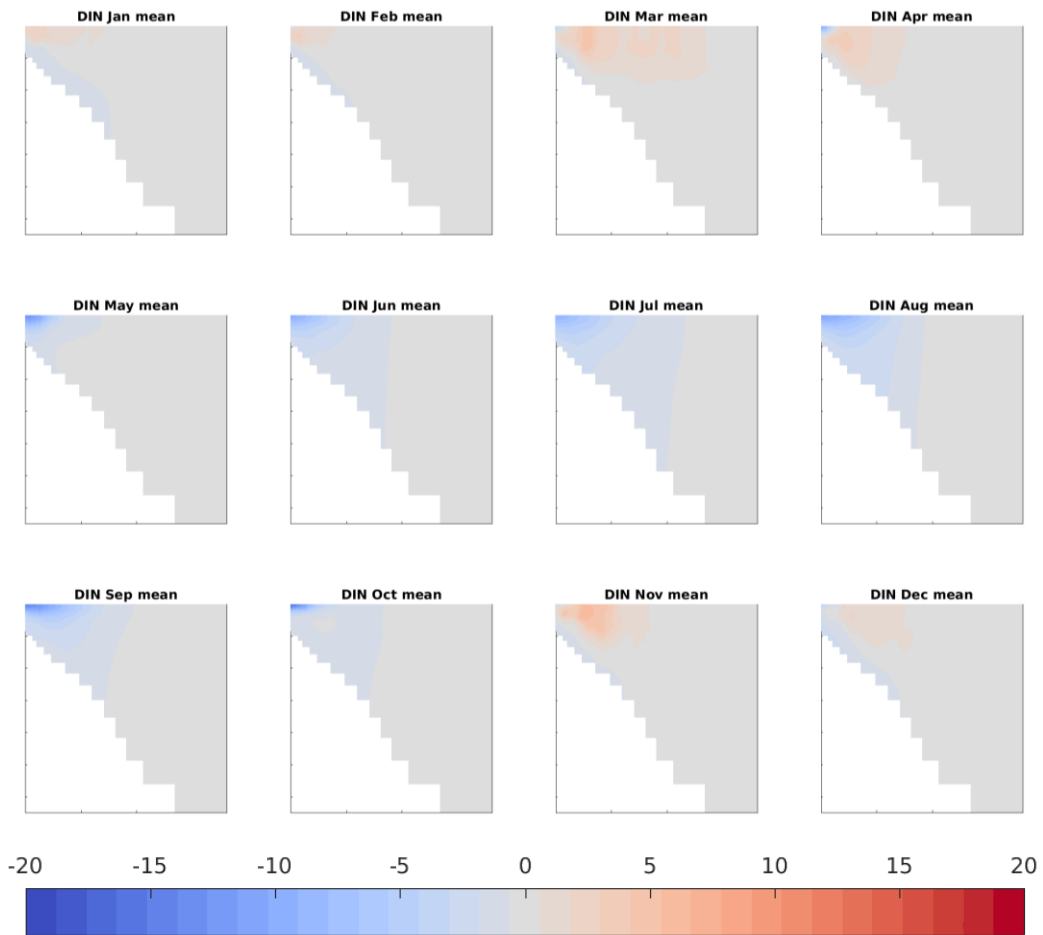




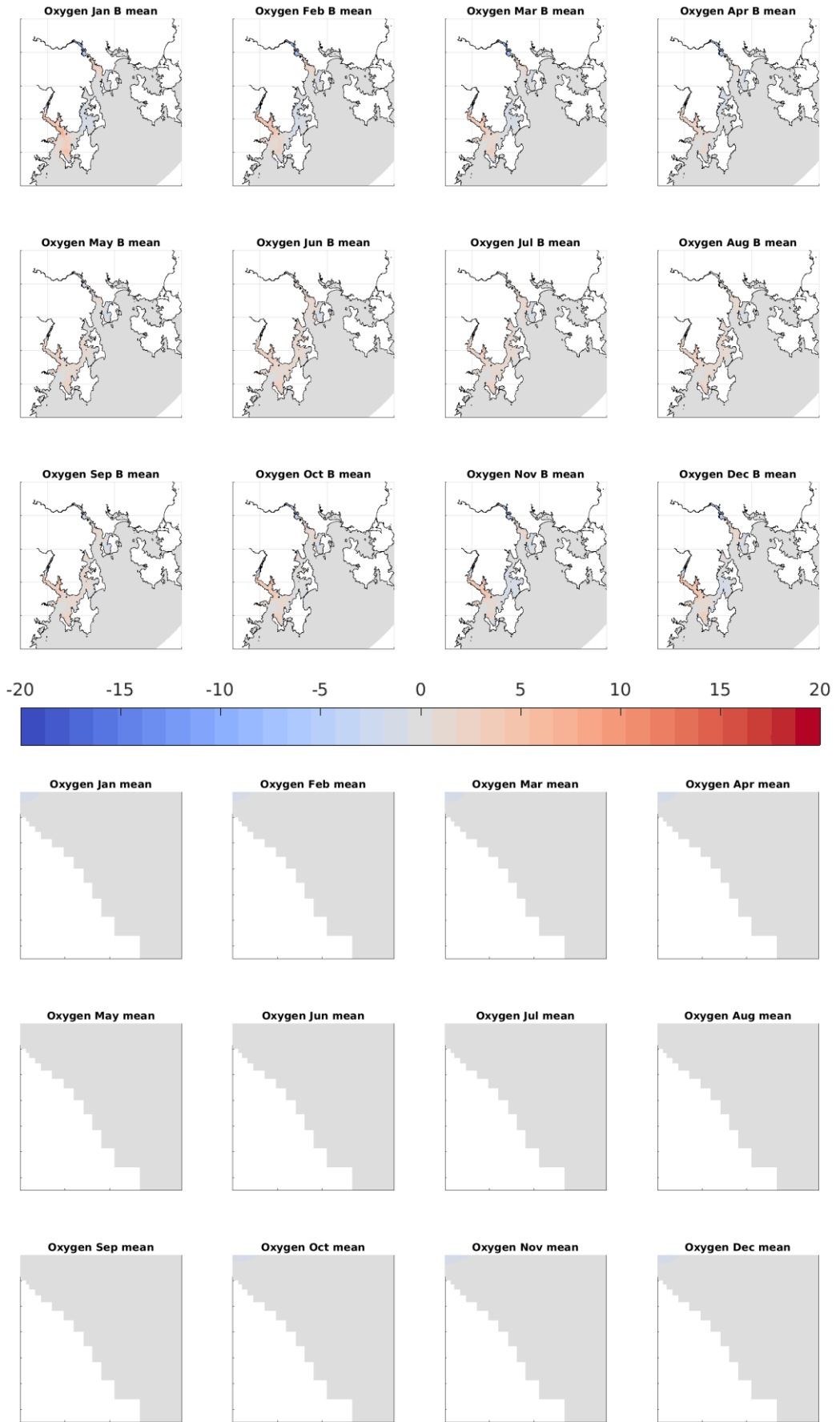
Scenario #3 Pre-Storm Bay (2015 sewerage, industry and 2013 fish farm nutrient loads)



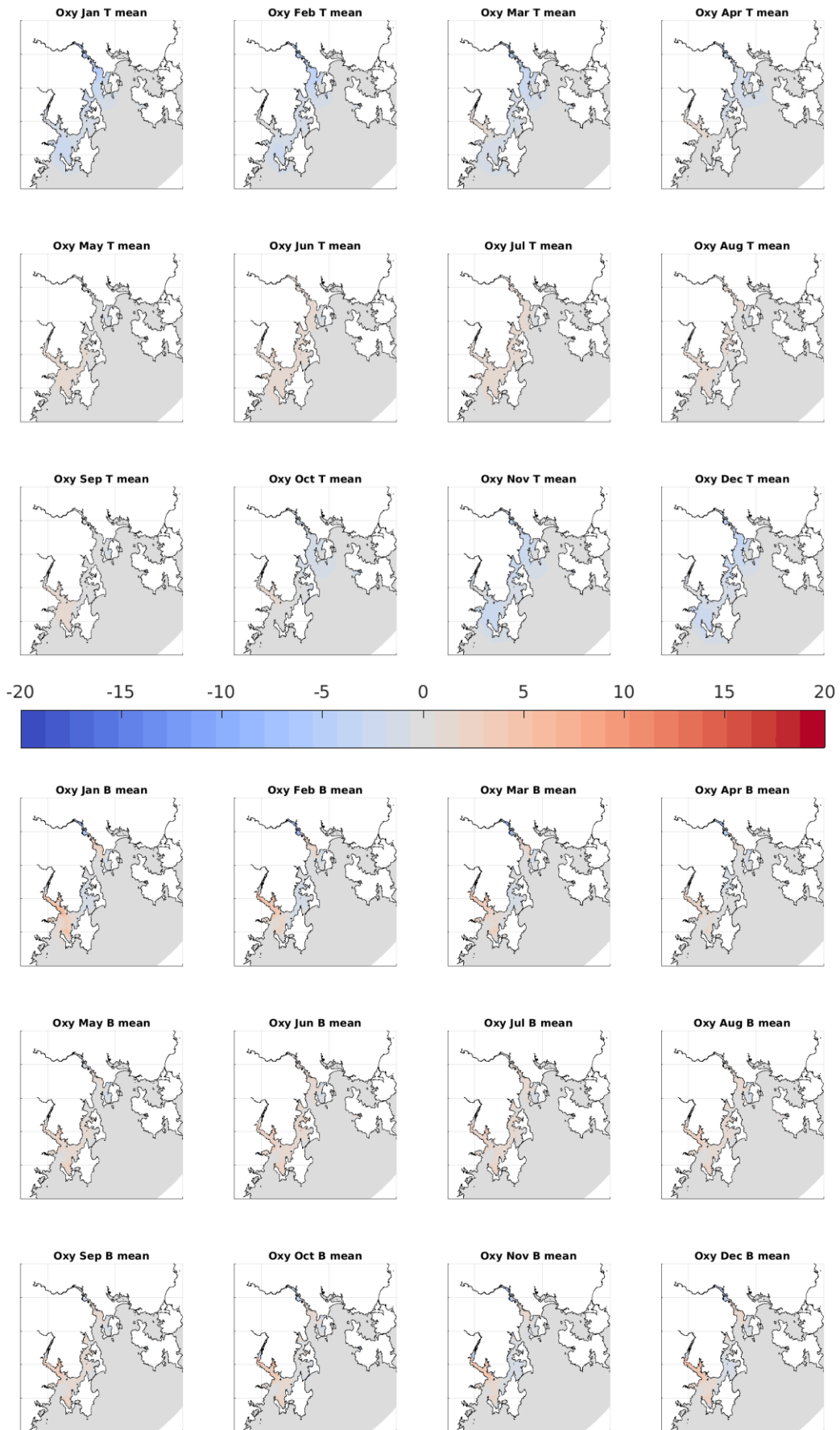
#2 Pre-Development scenario (no anthropogenic loads) - Scenario #3 Pre-Storm Bay (circa 2013) % Change



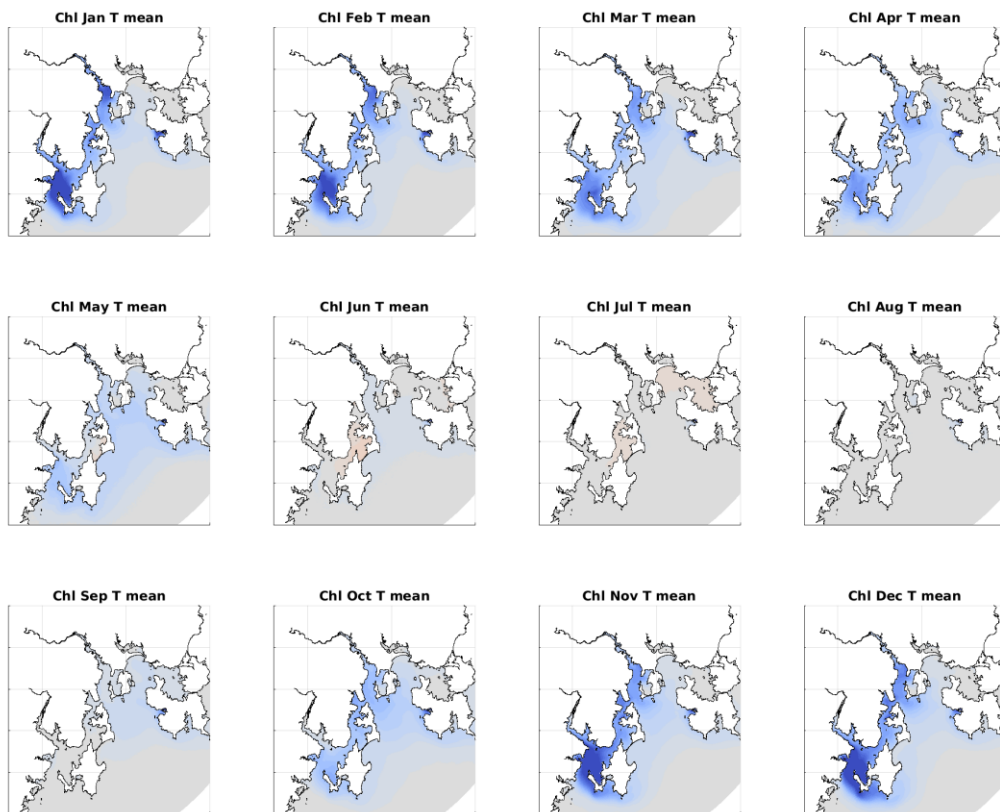
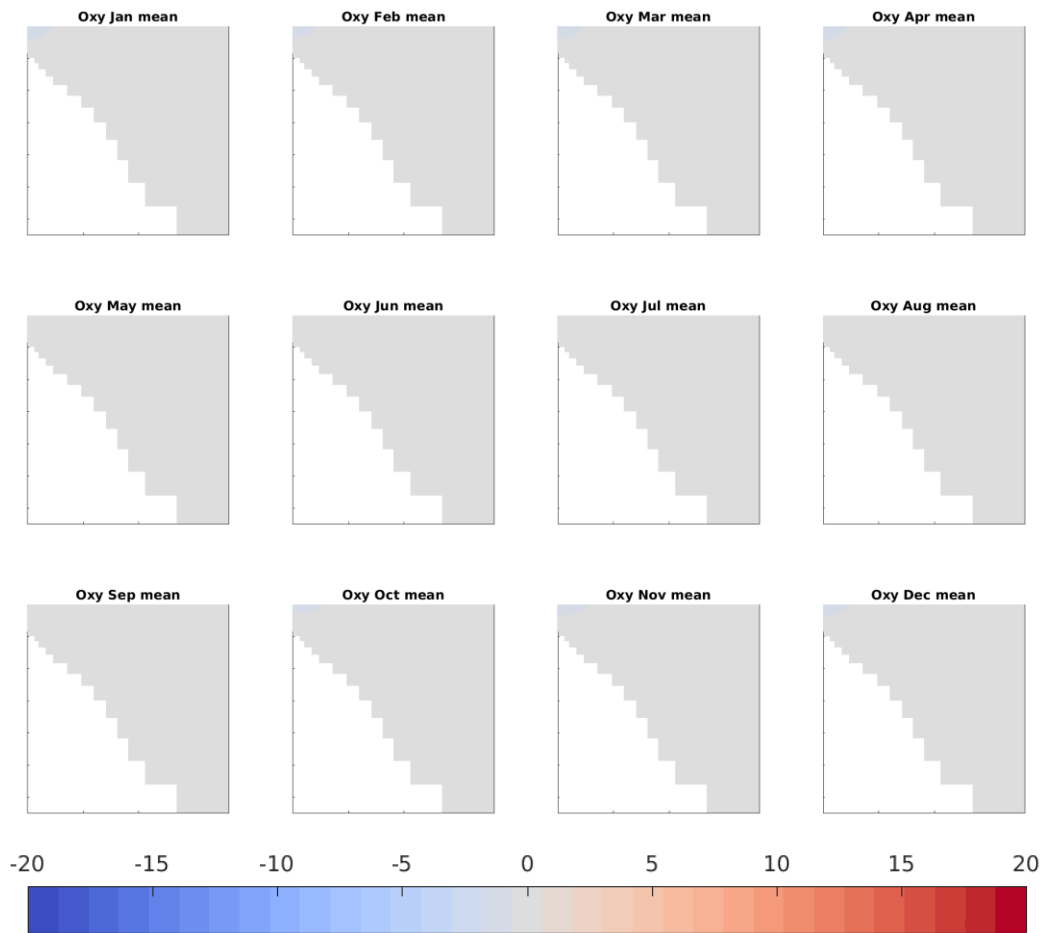
#2 Pre-Development scenario (no anthropogenic loads) - Scenario #3 Pre-Storm Bay (circa 2013) % Change



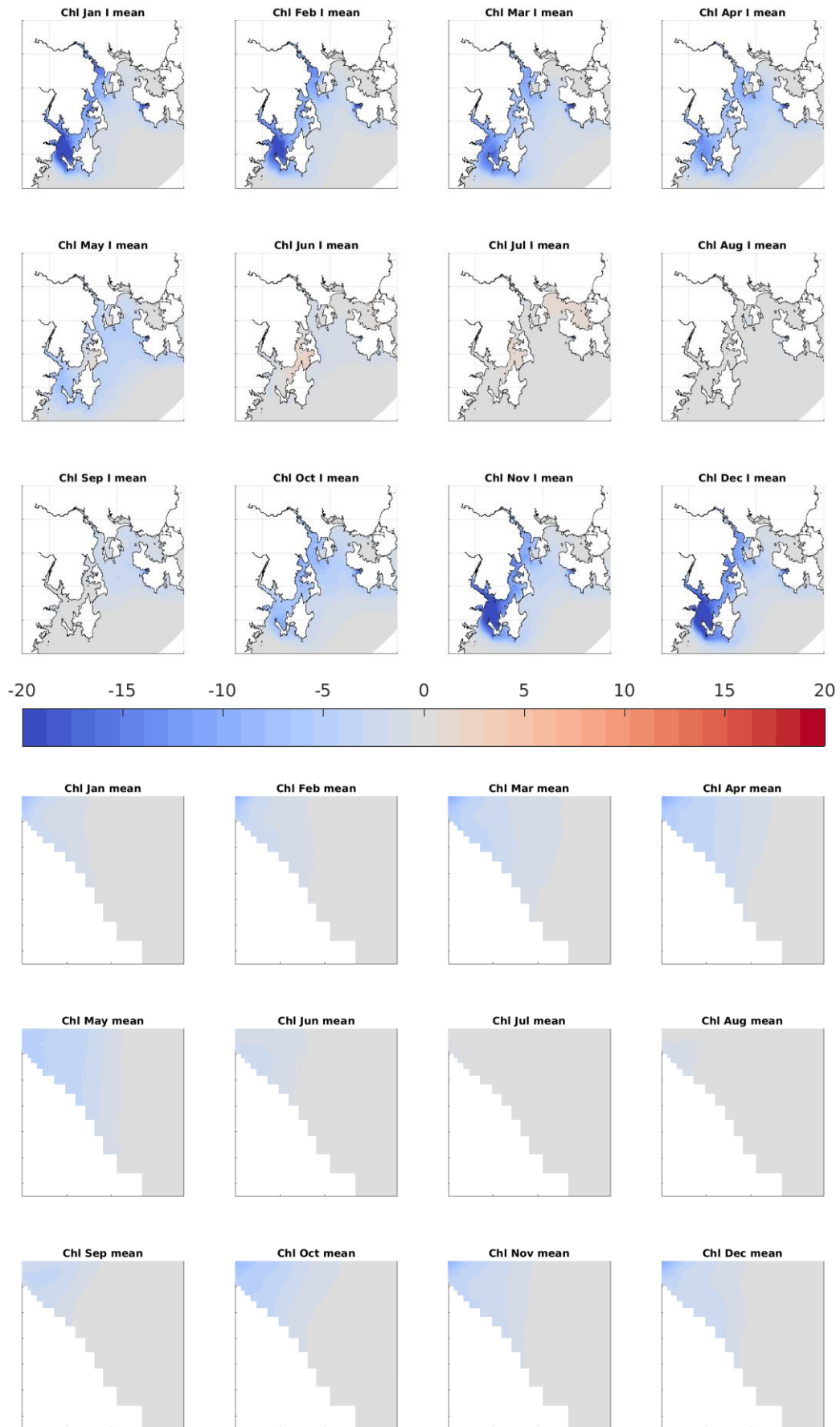
#2 Pre-Development scenario (no anthropogenic loads) - Scenario #3 Pre-Storm Bay (circa 2013) % Change



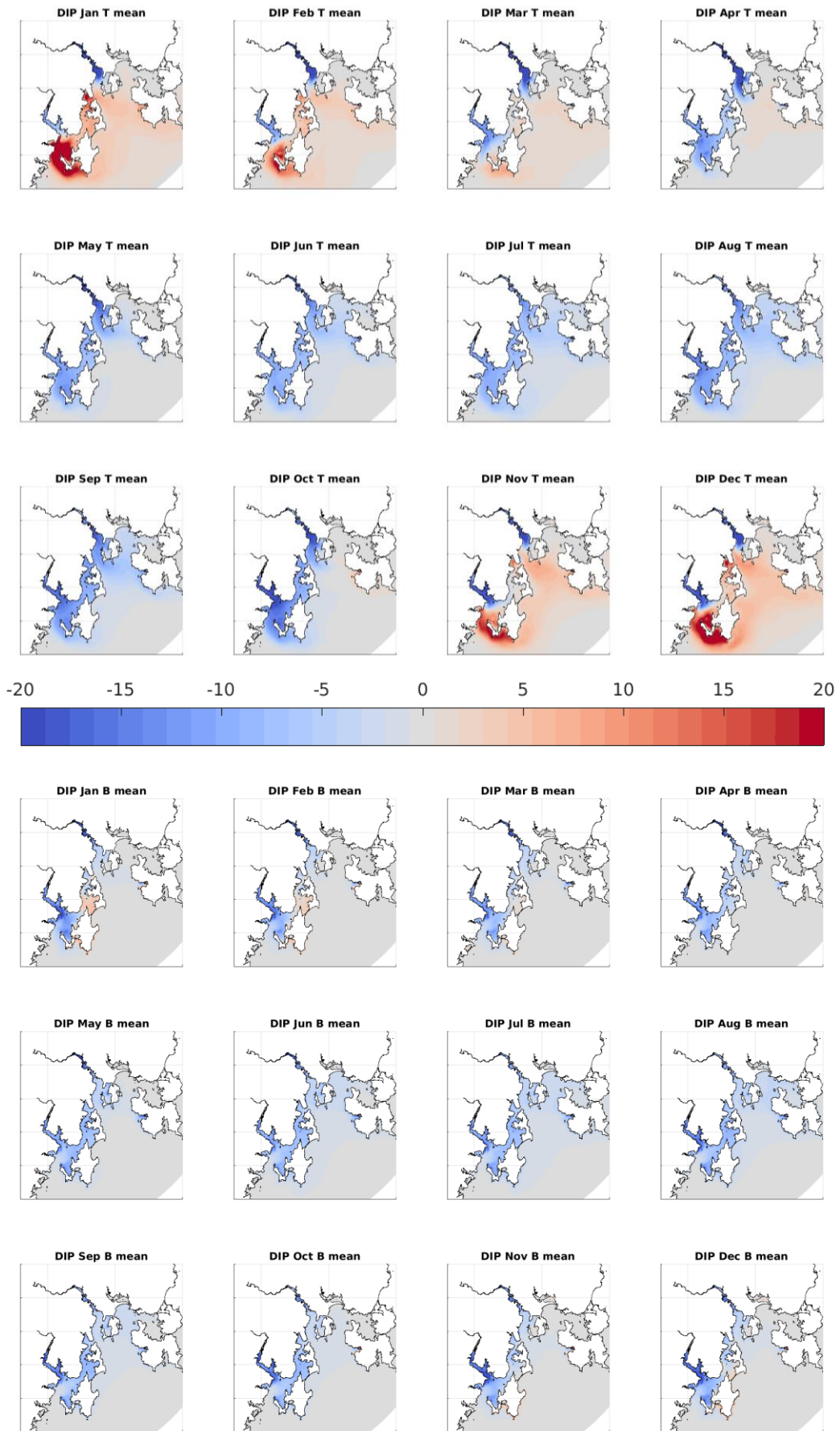
#2 Pre-Development scenario (no anthropogenic loads) - Scenario #3 Pre-Storm Bay (circa 2013) % Change



#2 Pre-Development scenario (no anthropogenic loads) - Scenario #3 Pre-Storm Bay (circa 2013) % Change

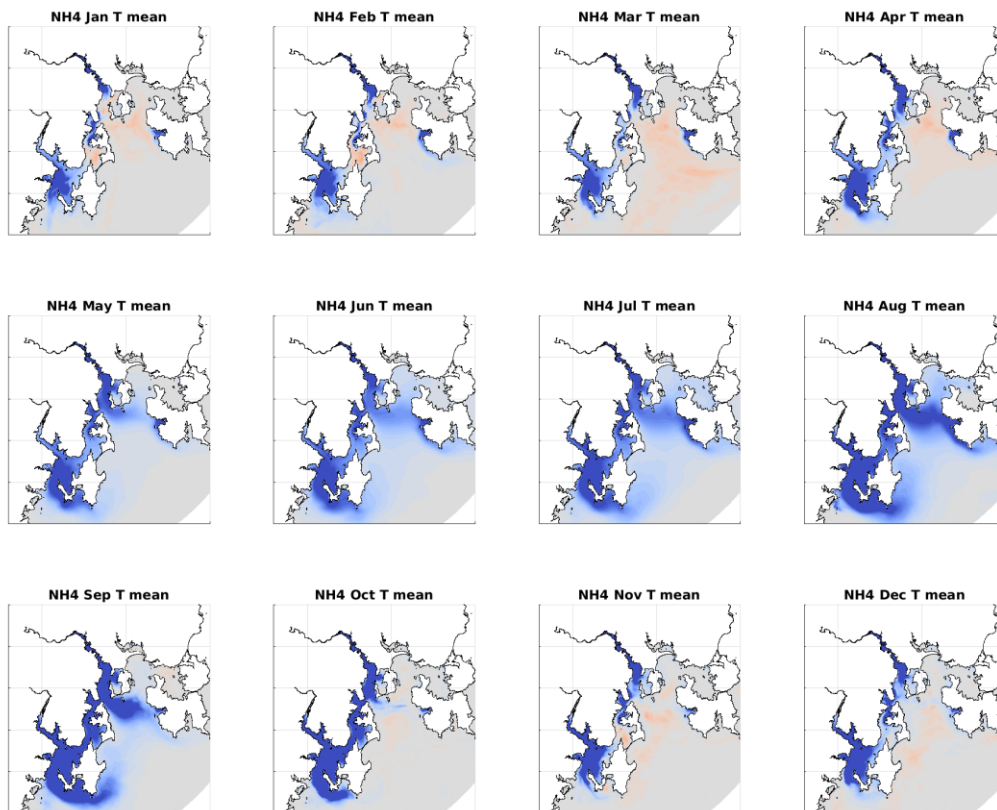
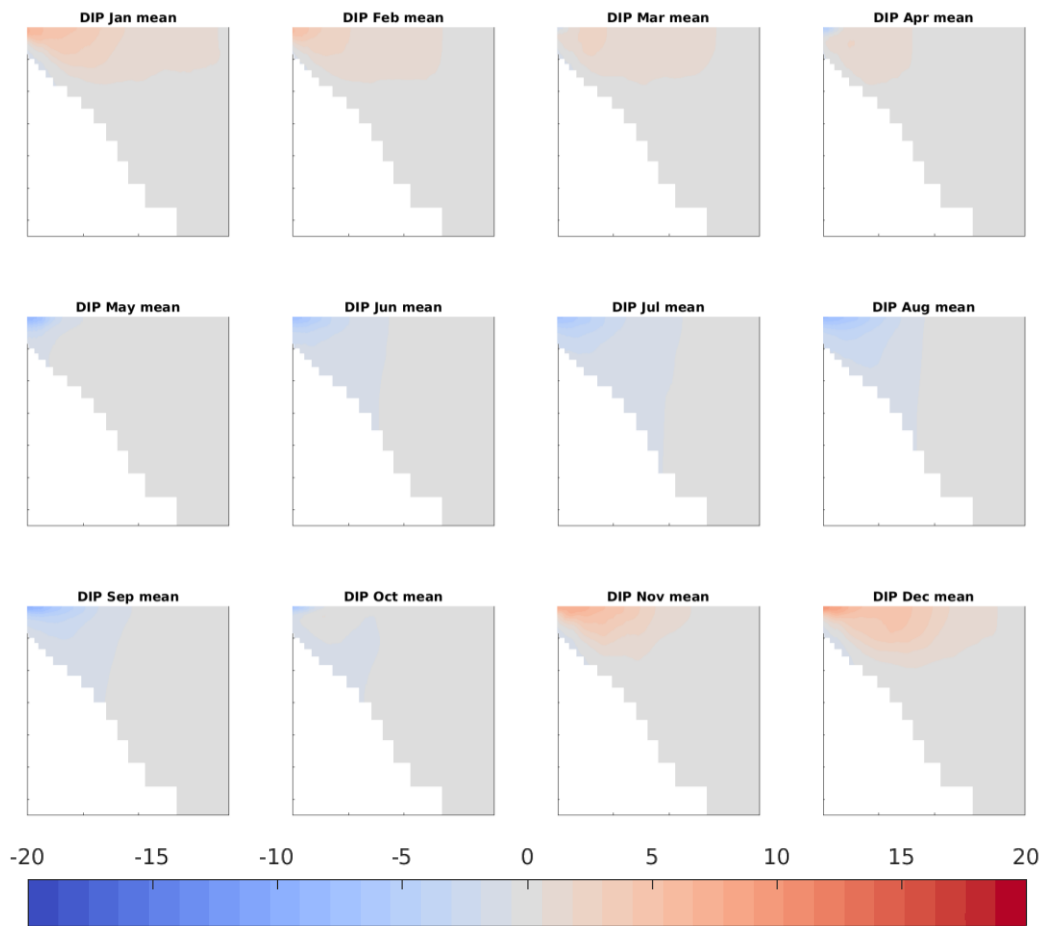


#2 Pre-Development scenario (no anthropogenic loads) - Scenario #3 Pre-Storm Bay (circa 2013) % Change

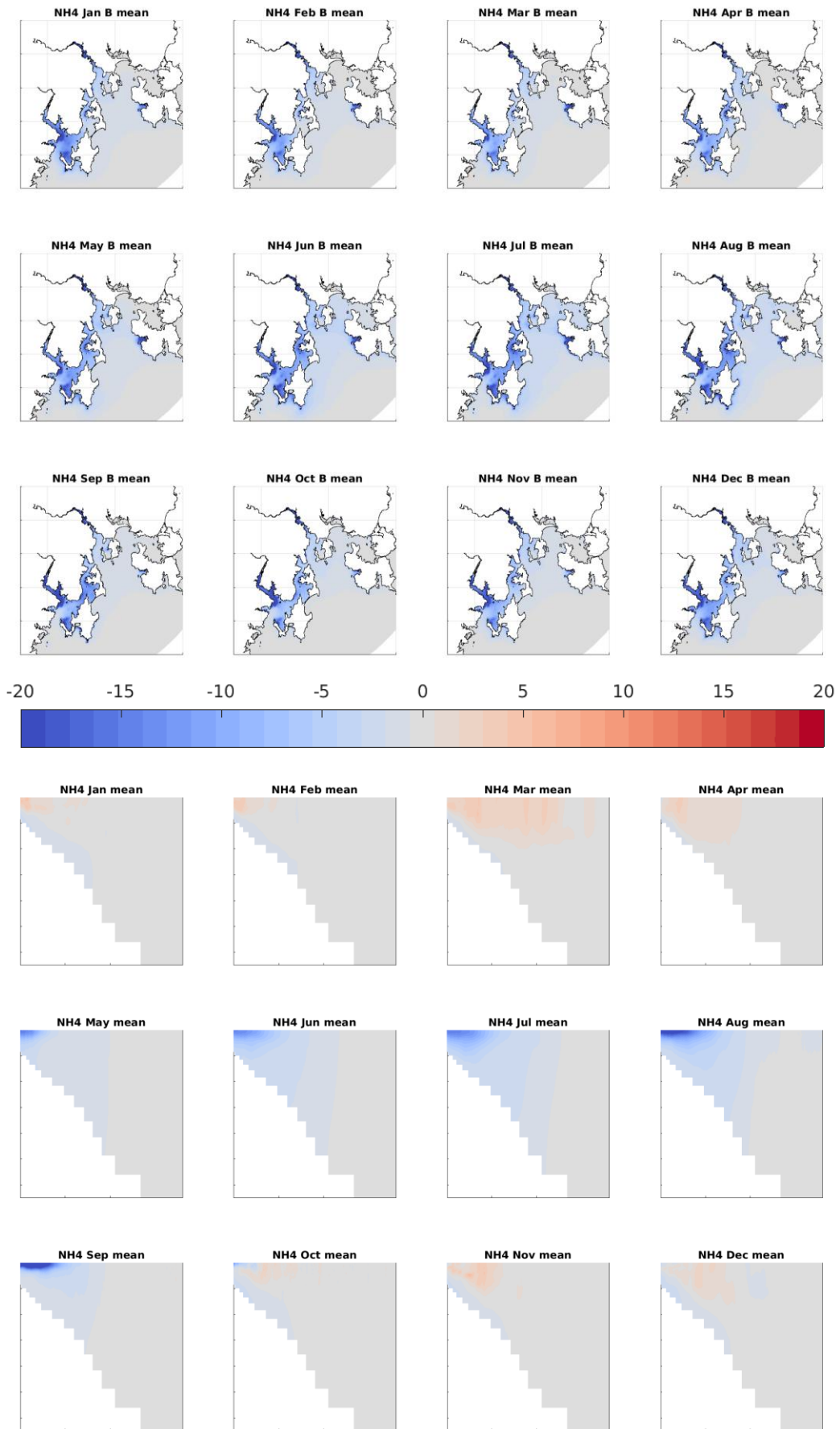


#2 Pre-Development scenario (no anthropogenic loads) - Scenario #3 Pre-Storm Bay (circa 2013) % Change

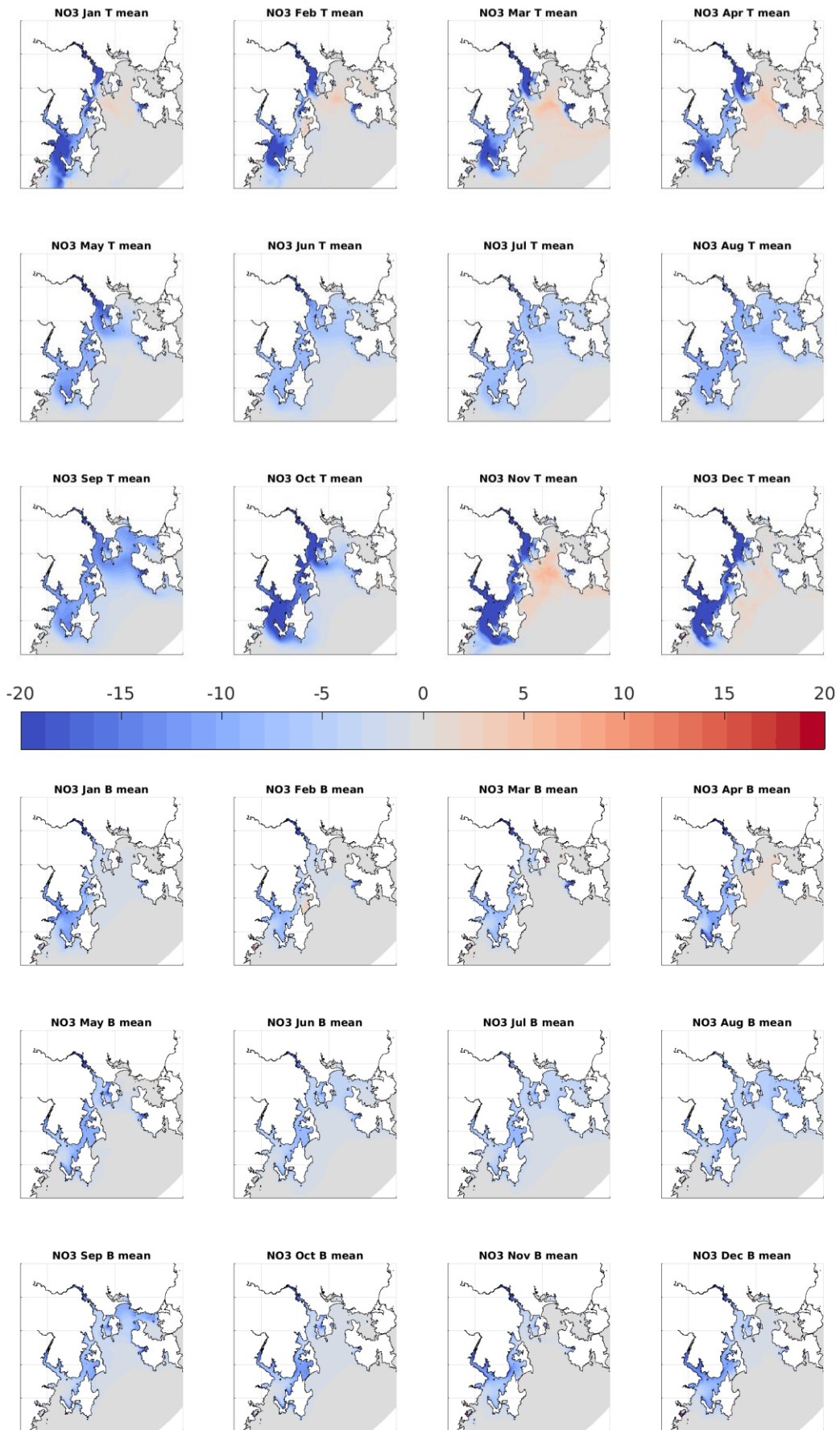




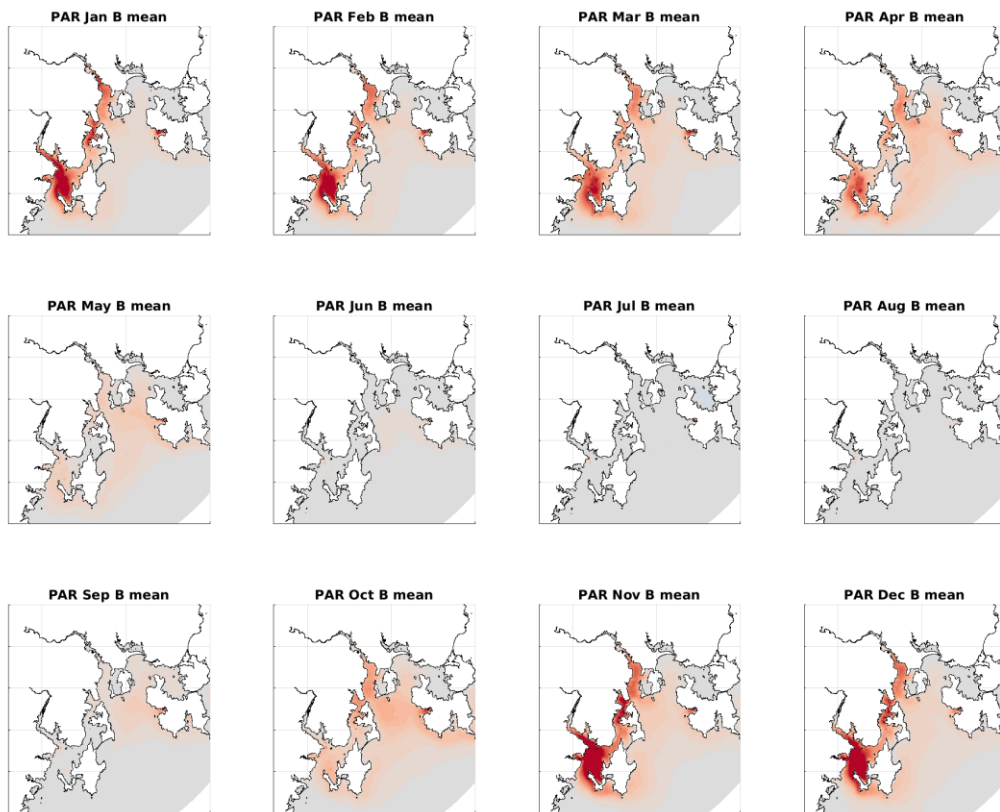
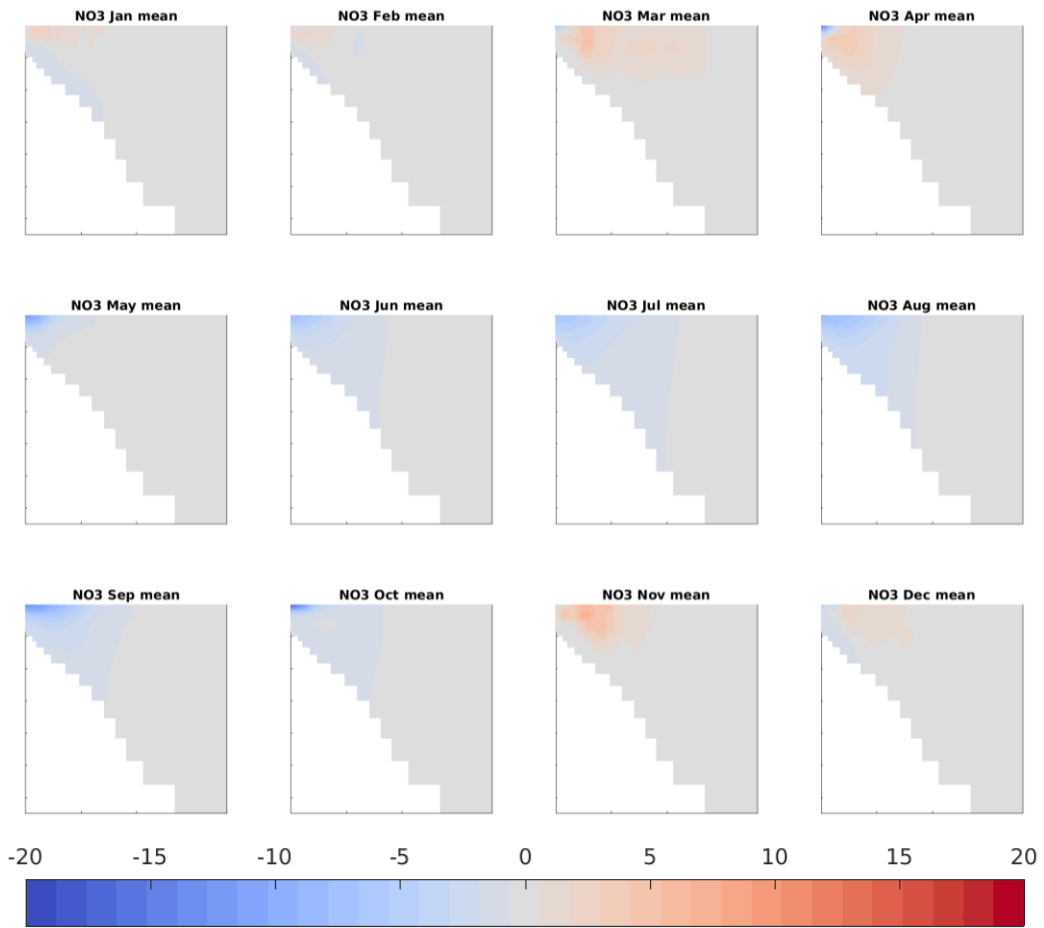
#2 Pre-Development scenario (no anthropogenic loads) - Scenario #3 Pre-Storm Bay (circa 2013) % Change



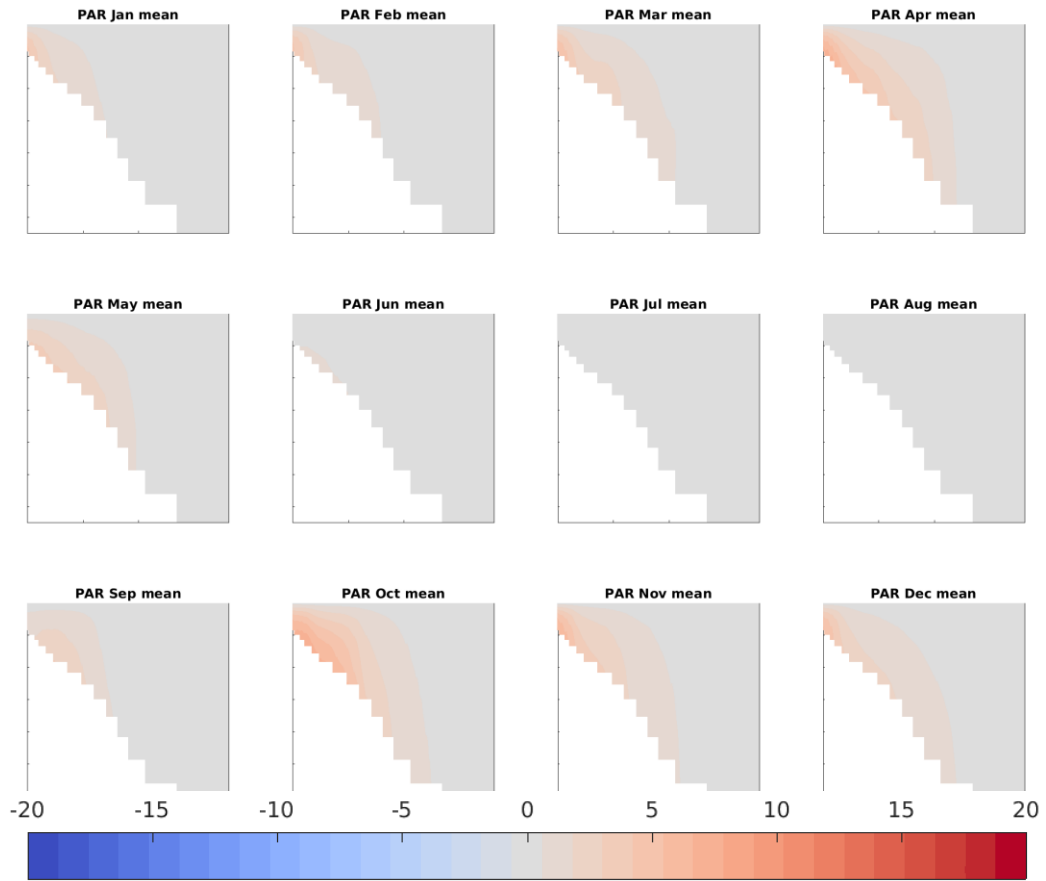
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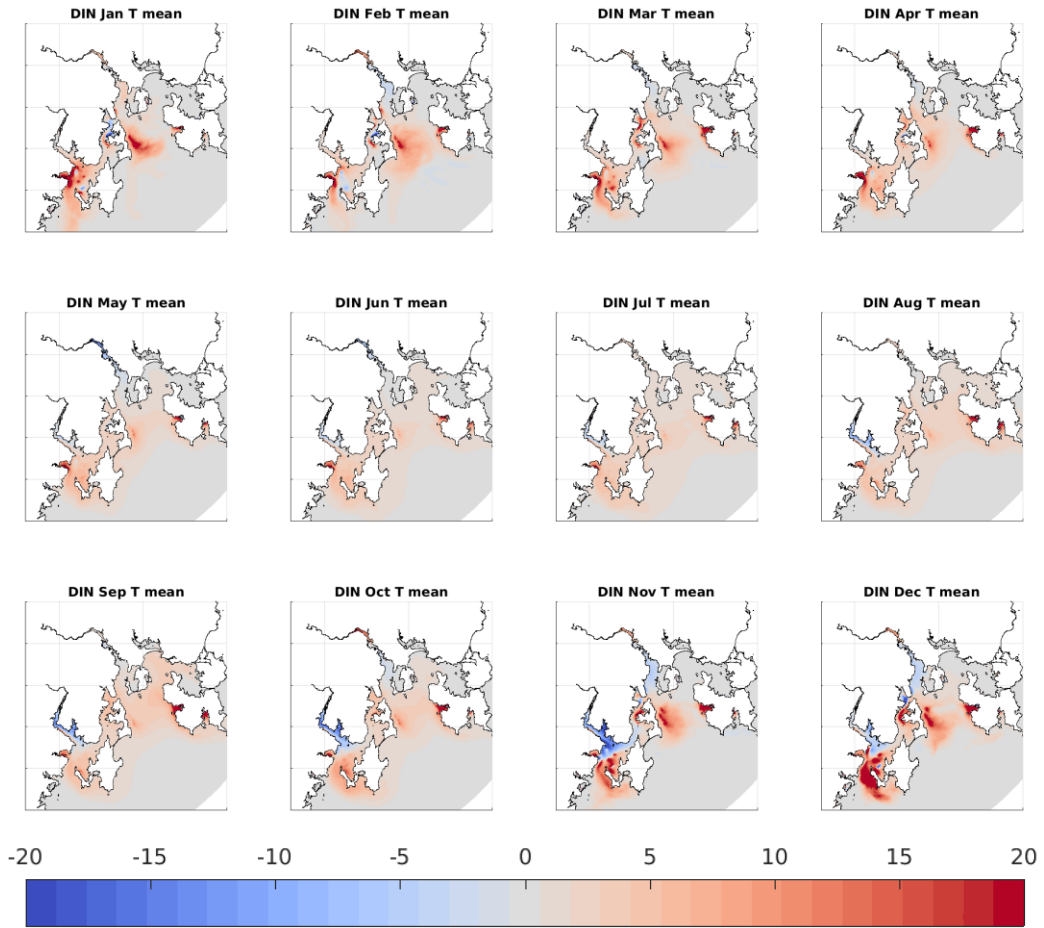
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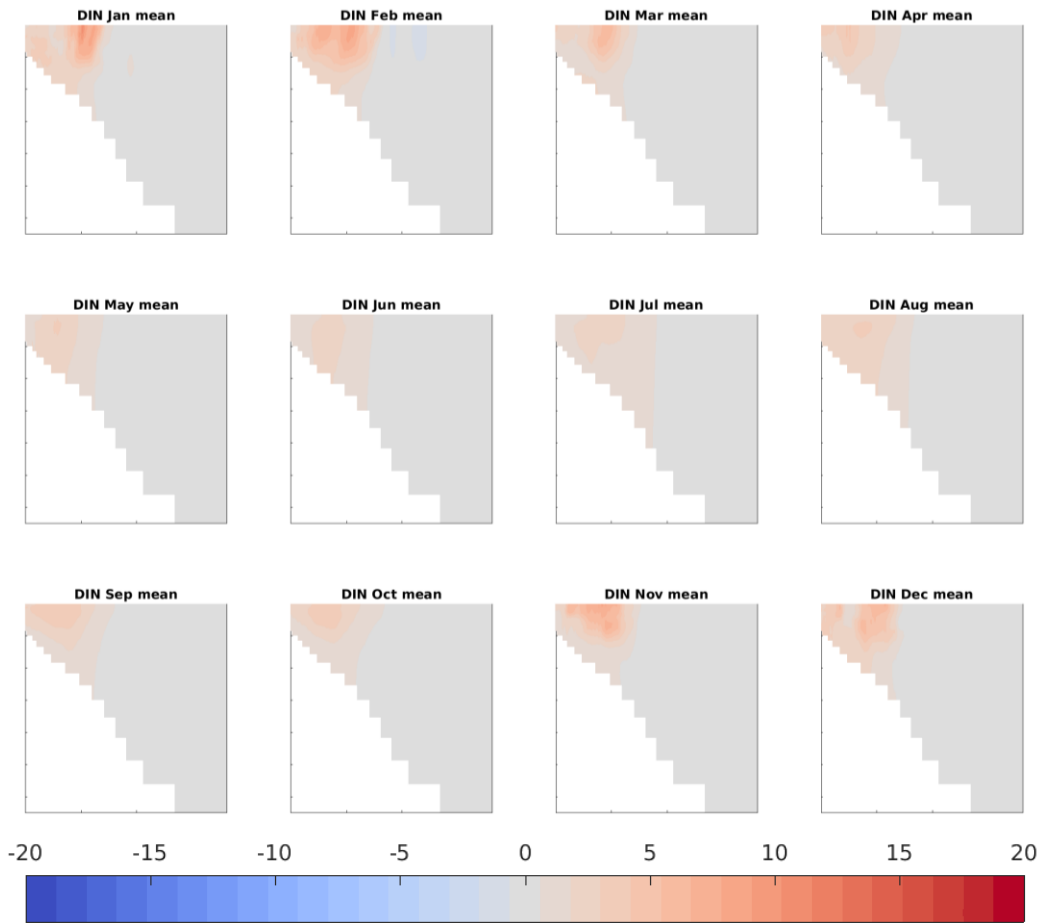
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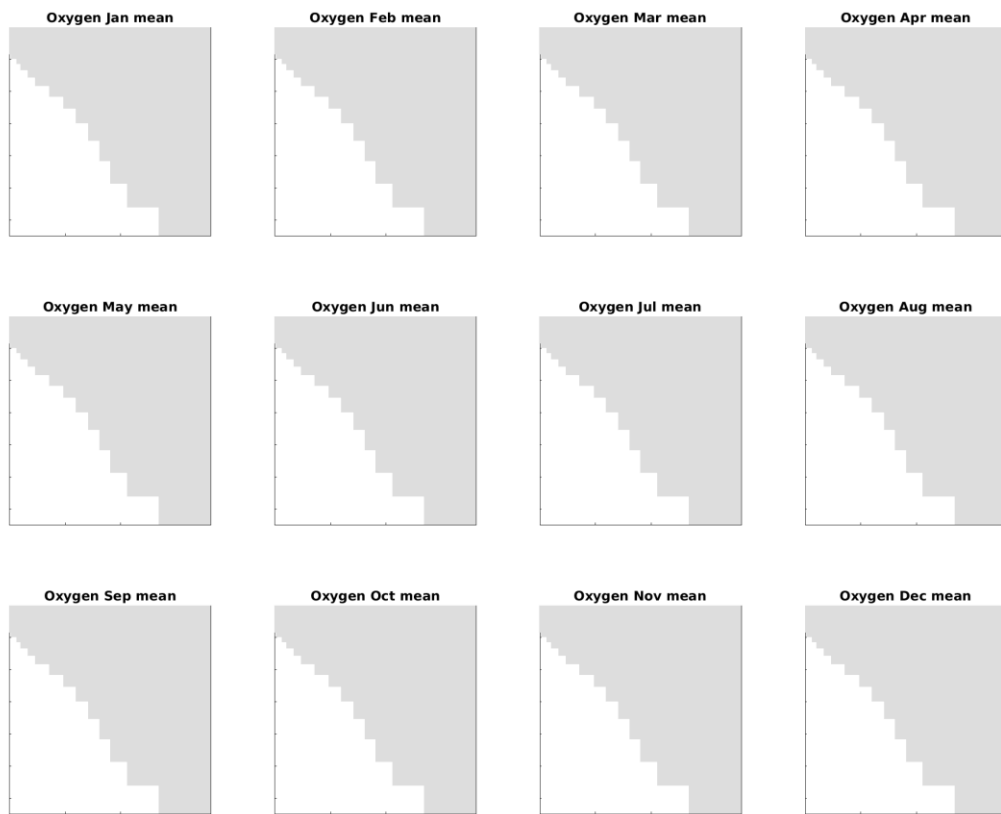
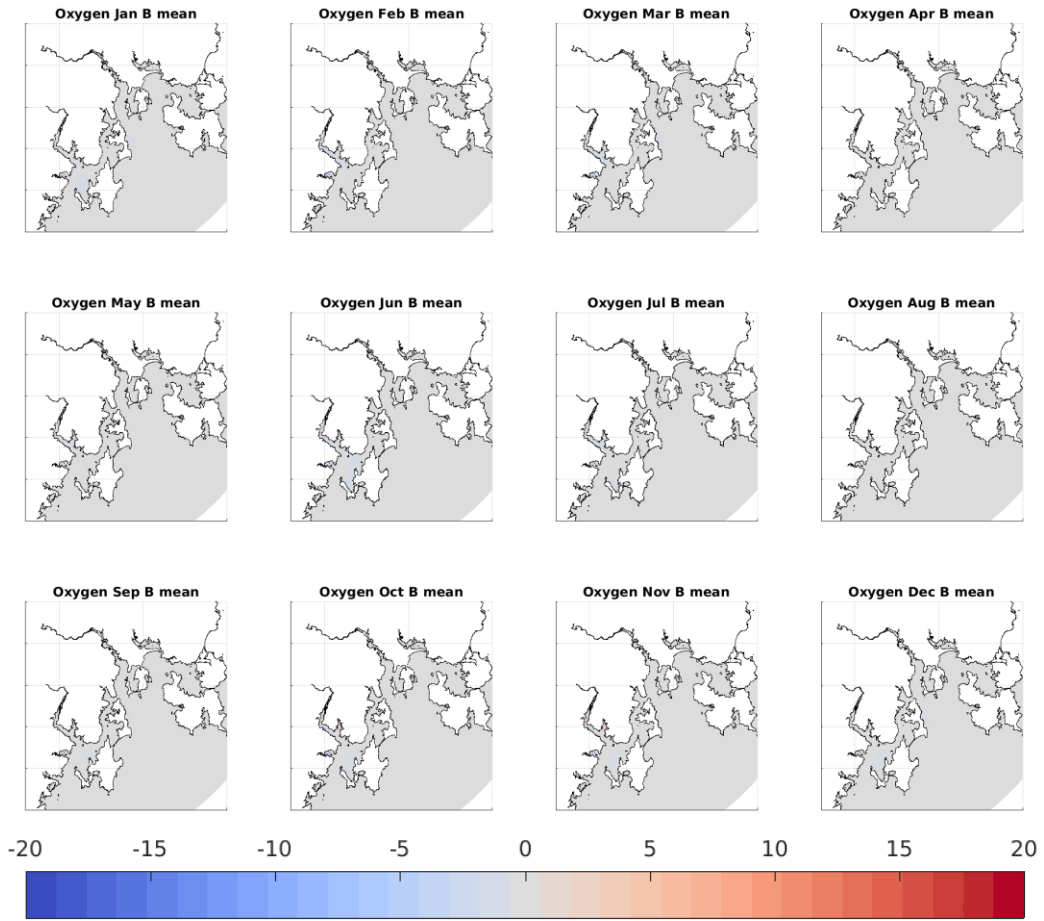
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#1 Hindcast simulation - Scenario #3 Pre-Storm Bay (circa 2013) % Change

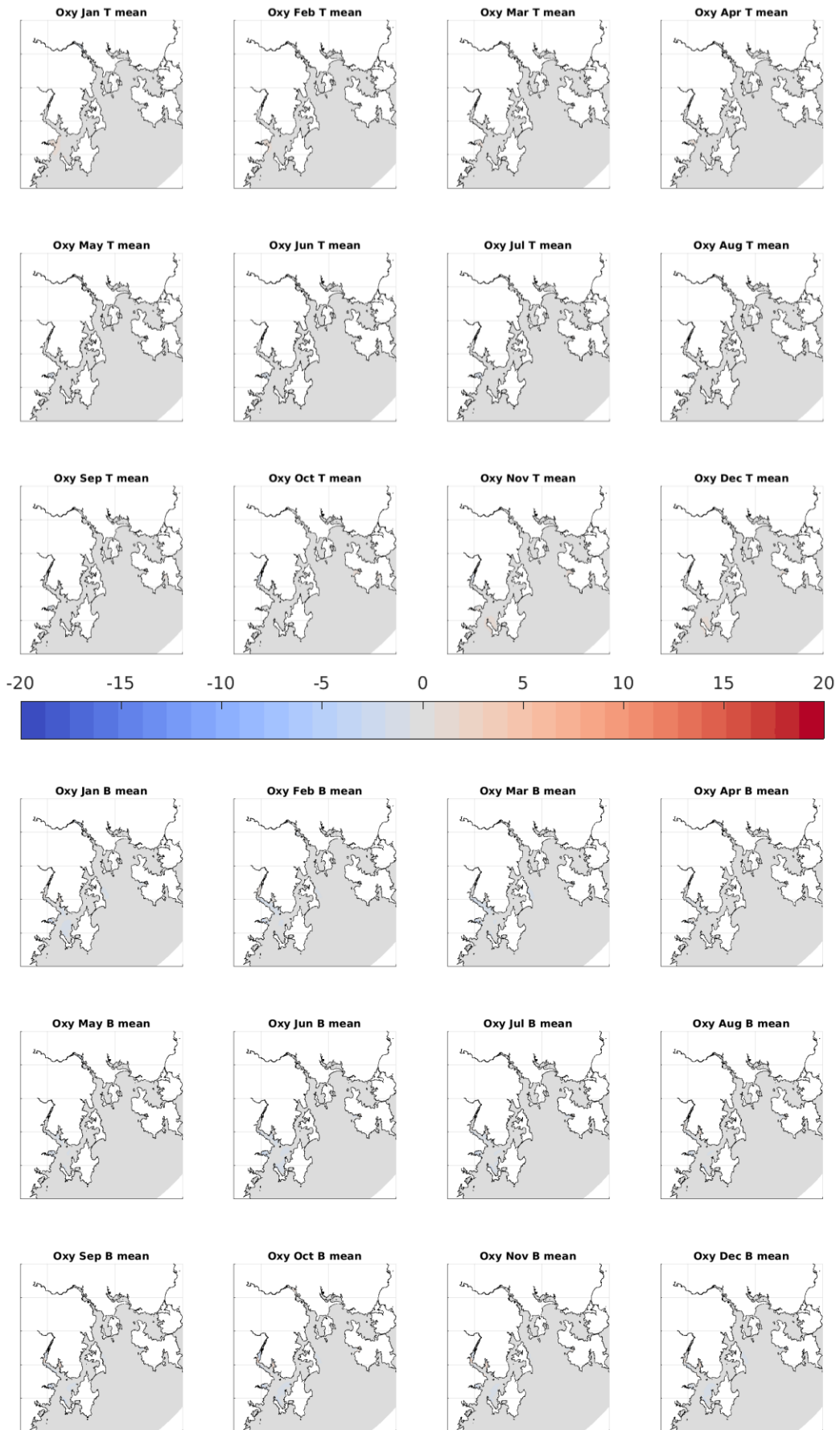


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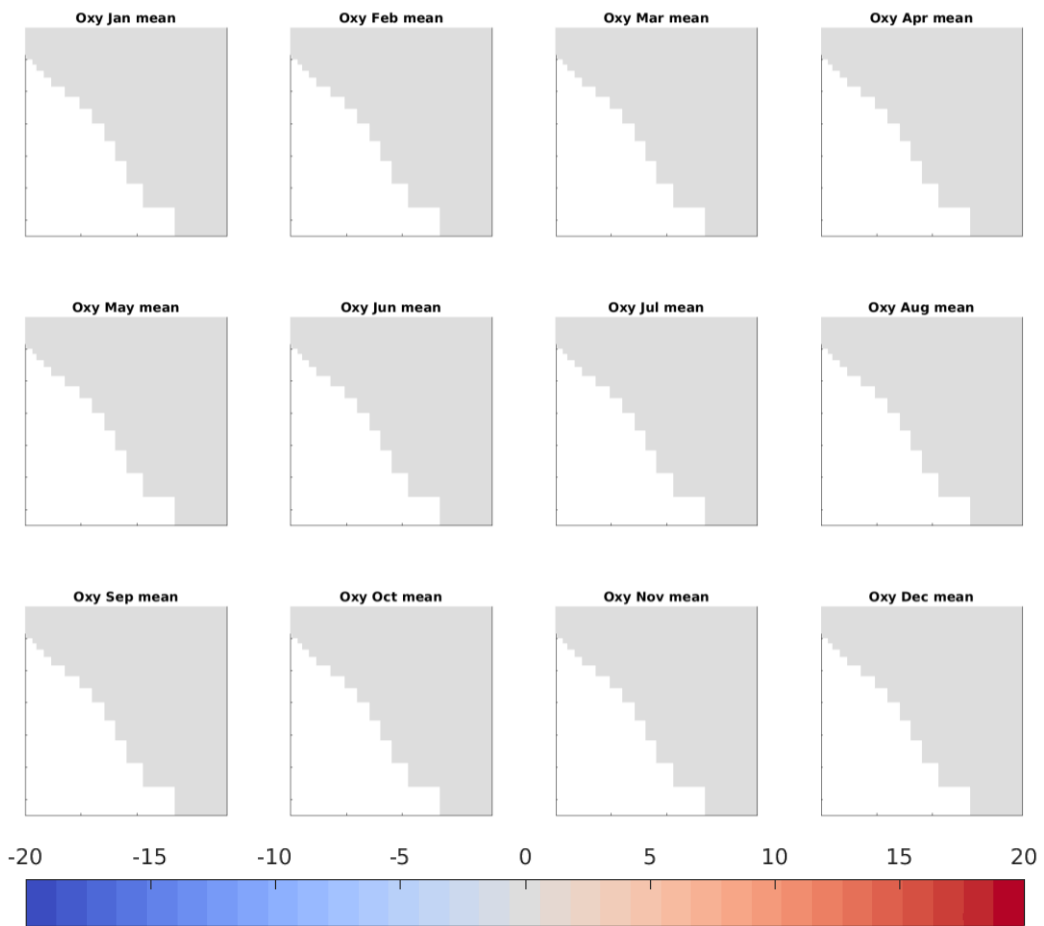


#1 Hindcast simulation - Scenario #3 Pre-Storm Bay (circa 2013) % Change

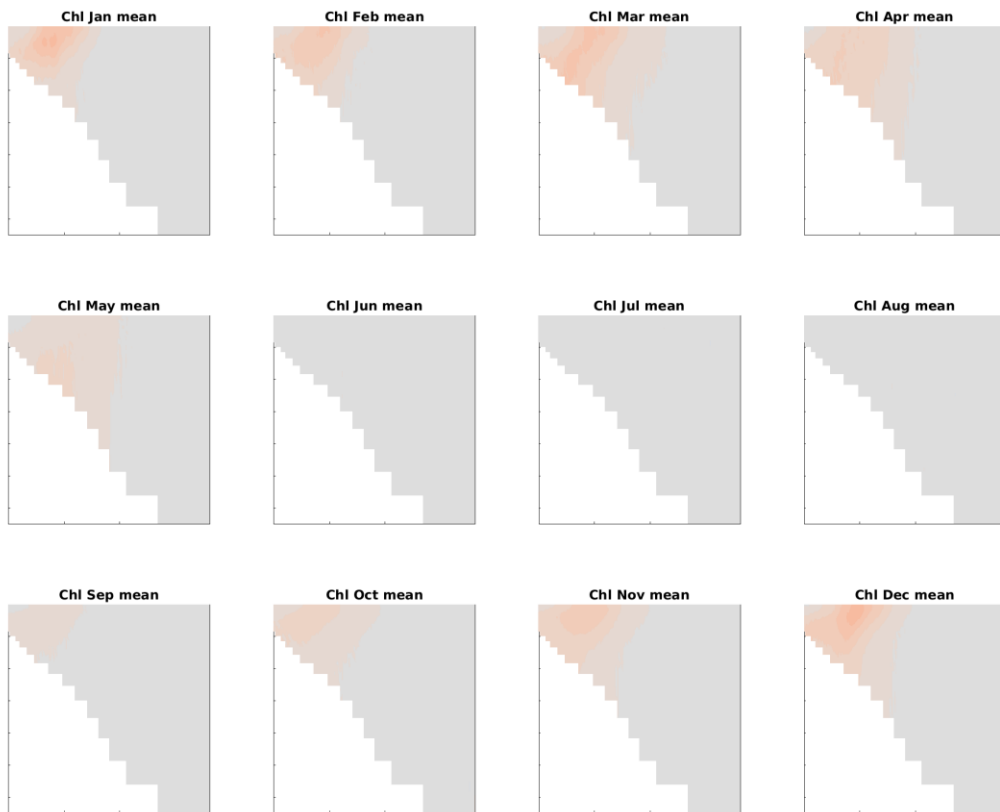
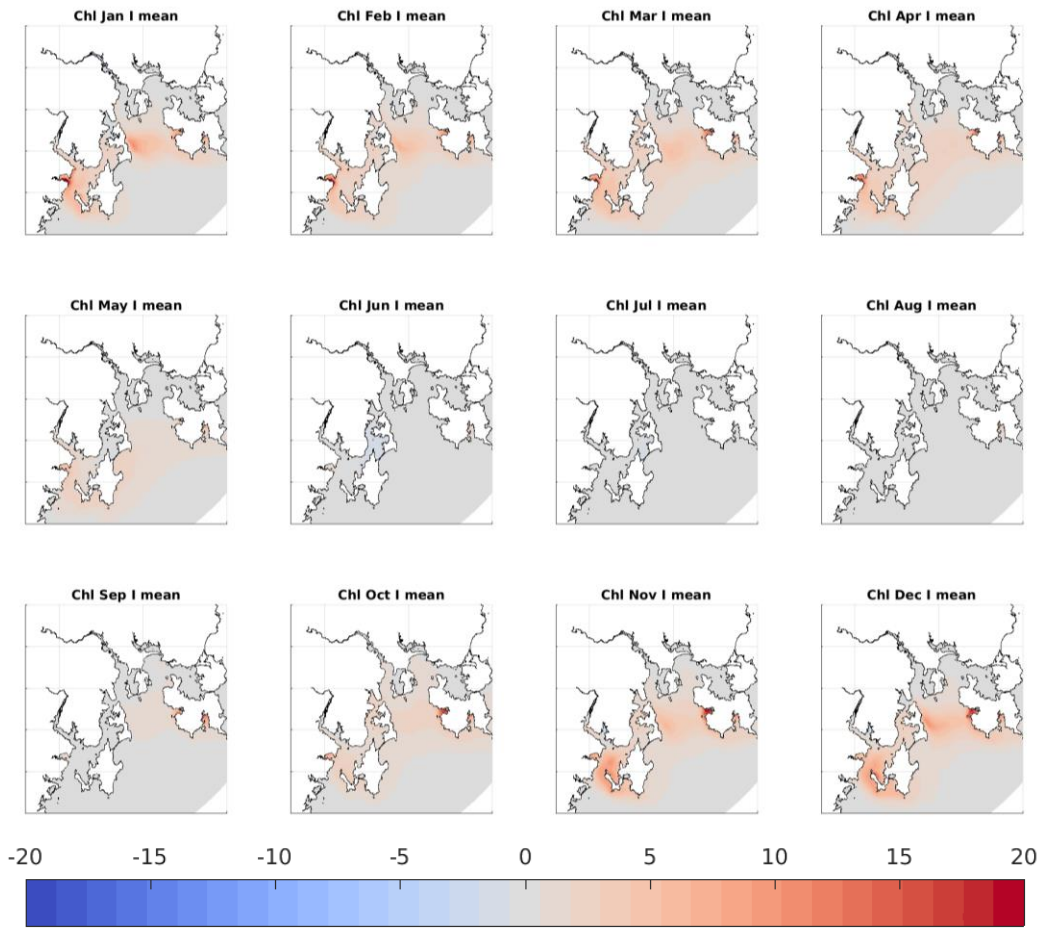




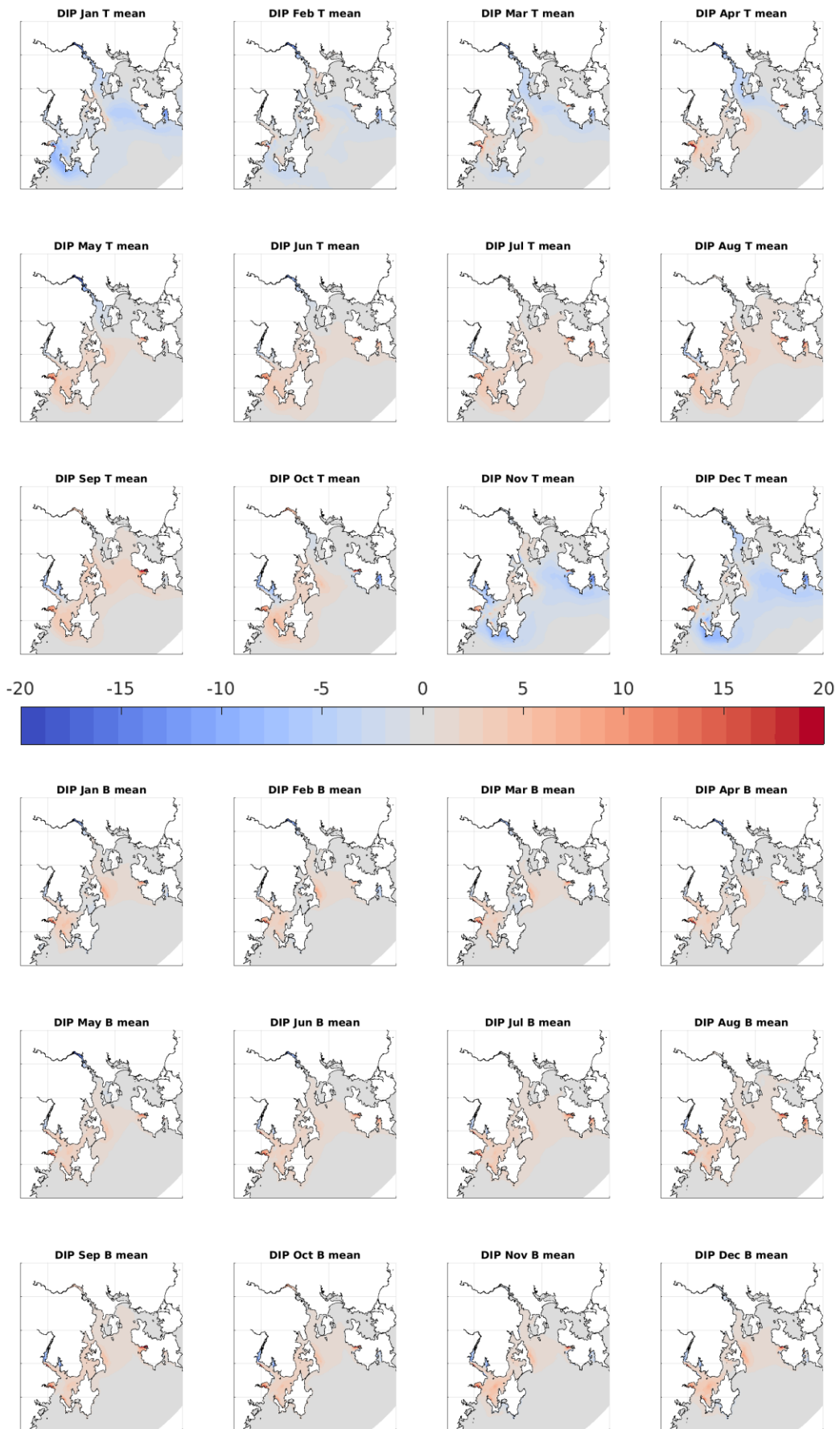
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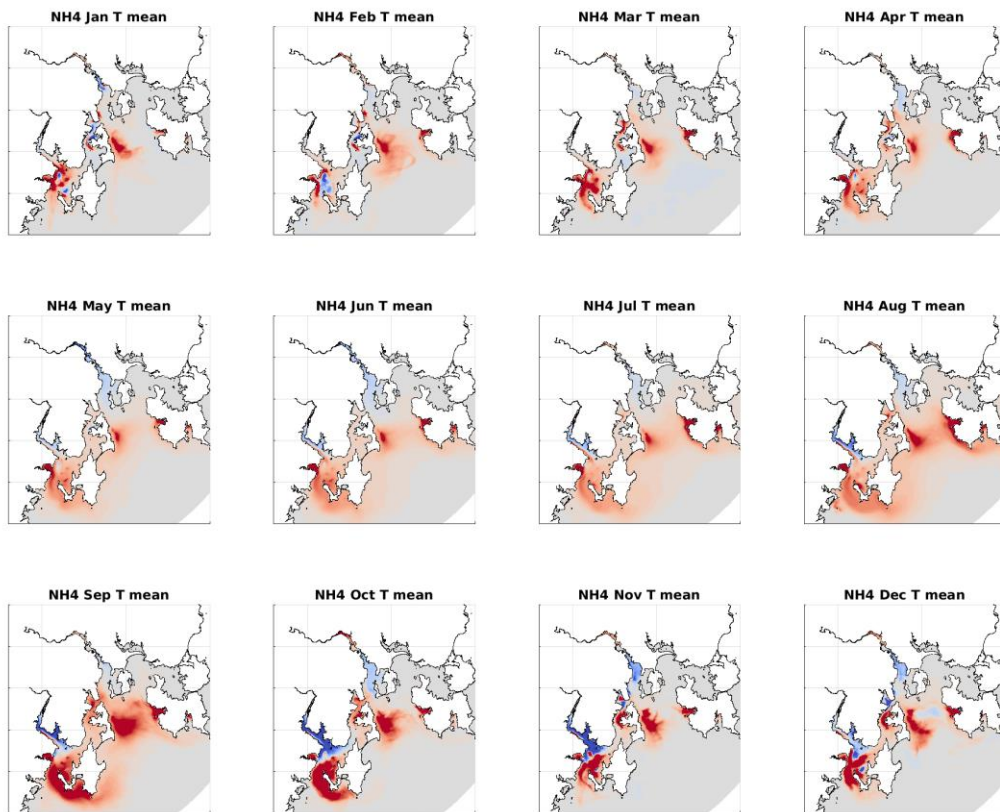
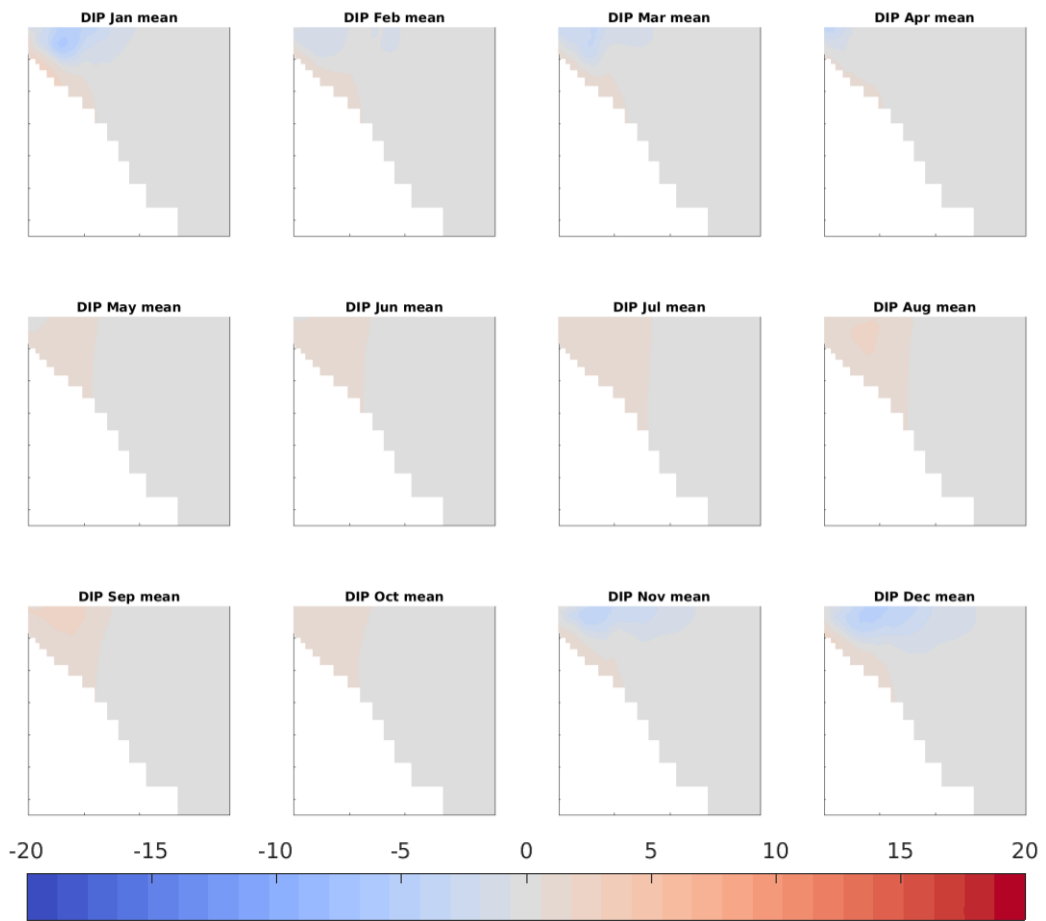
#1 Hindcast simulation - Scenario #3 Pre-Storm Bay (circa 2013) % Change



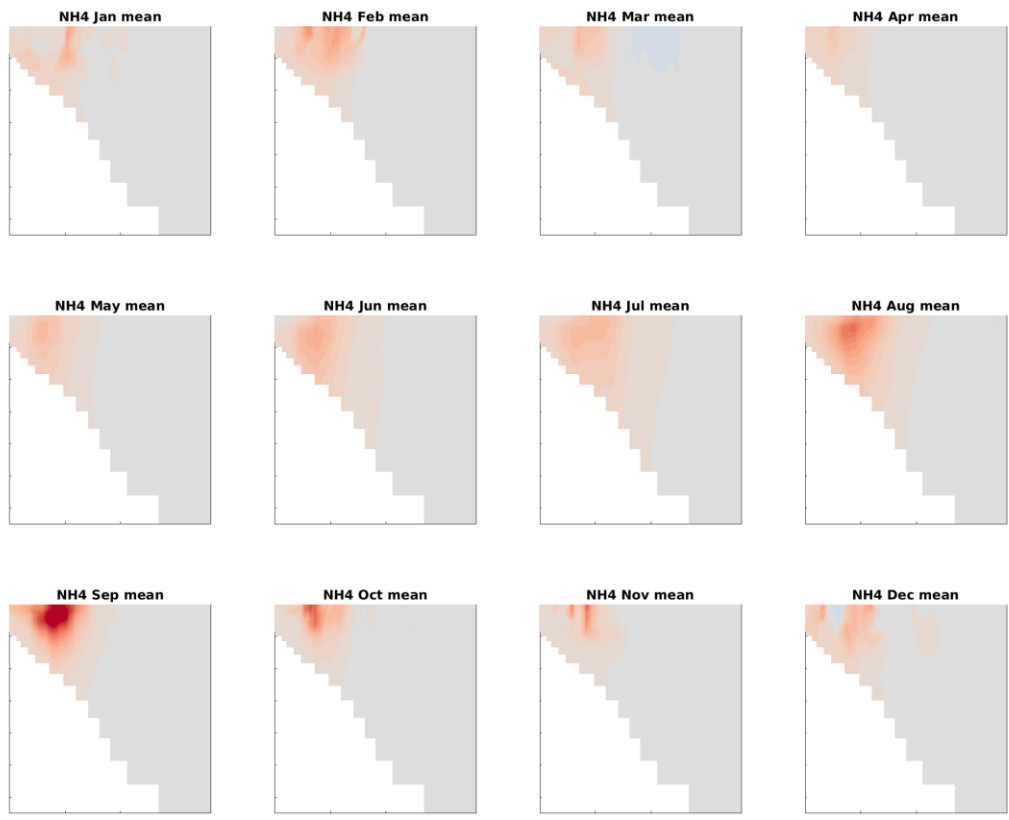
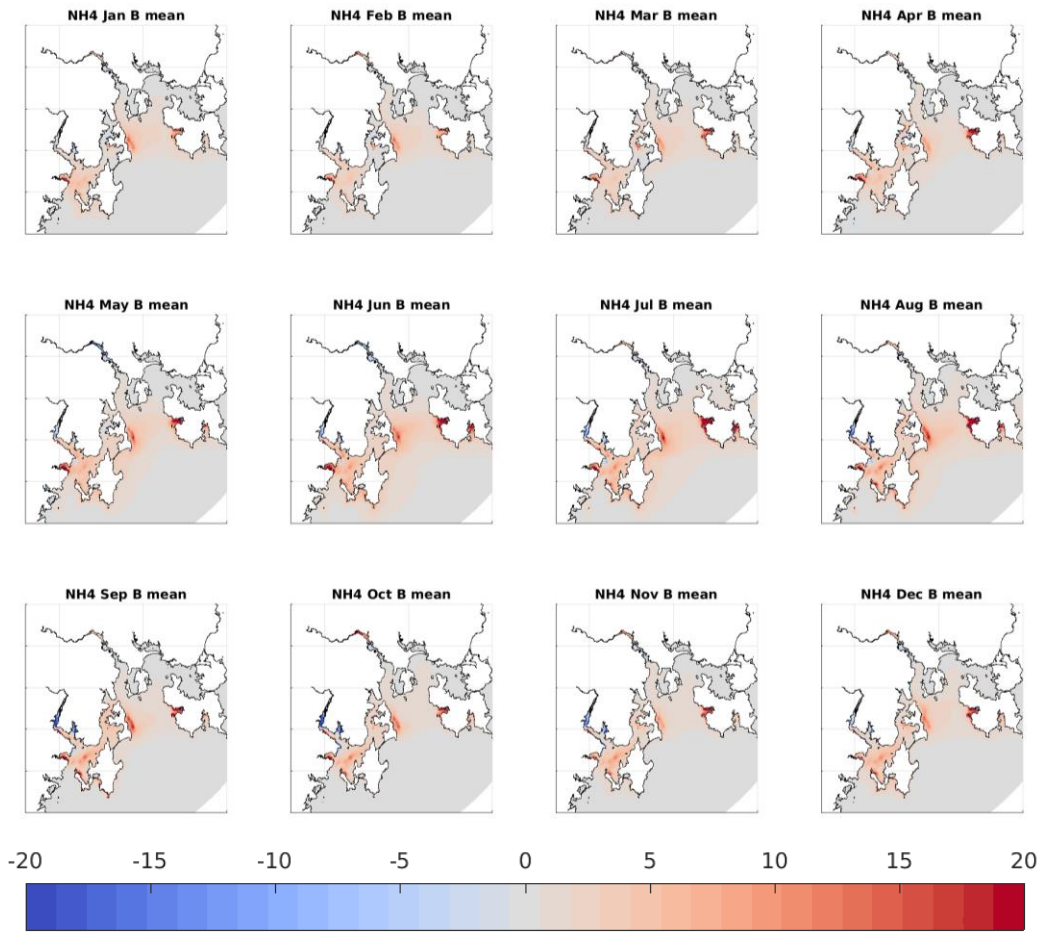
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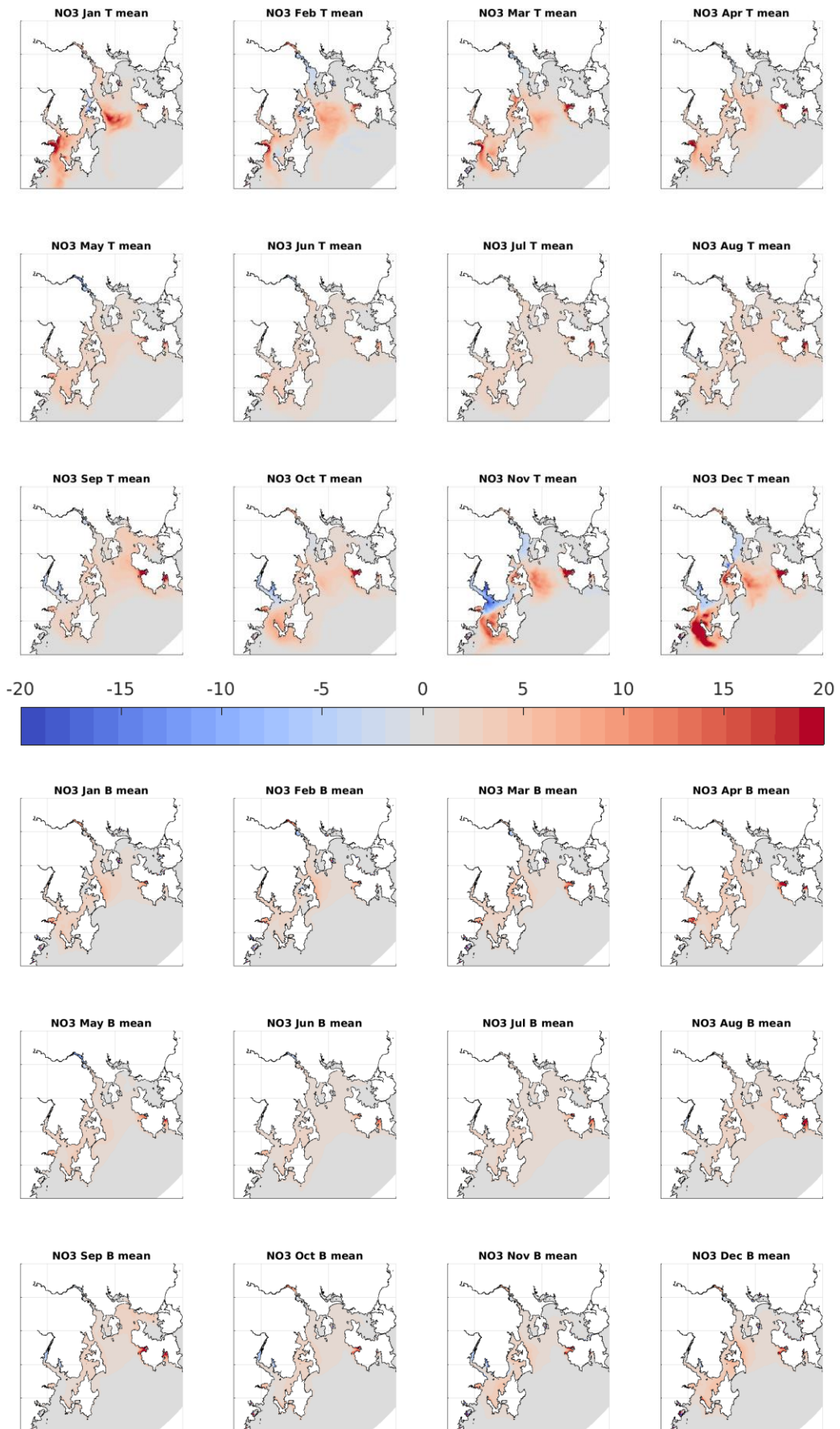
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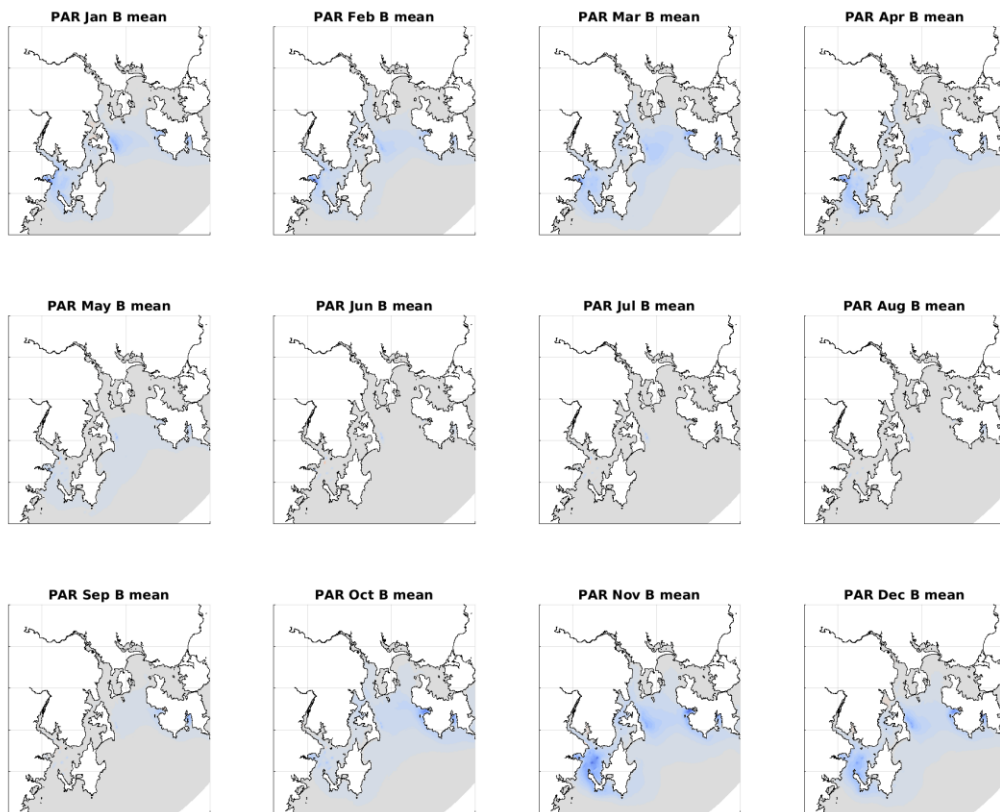
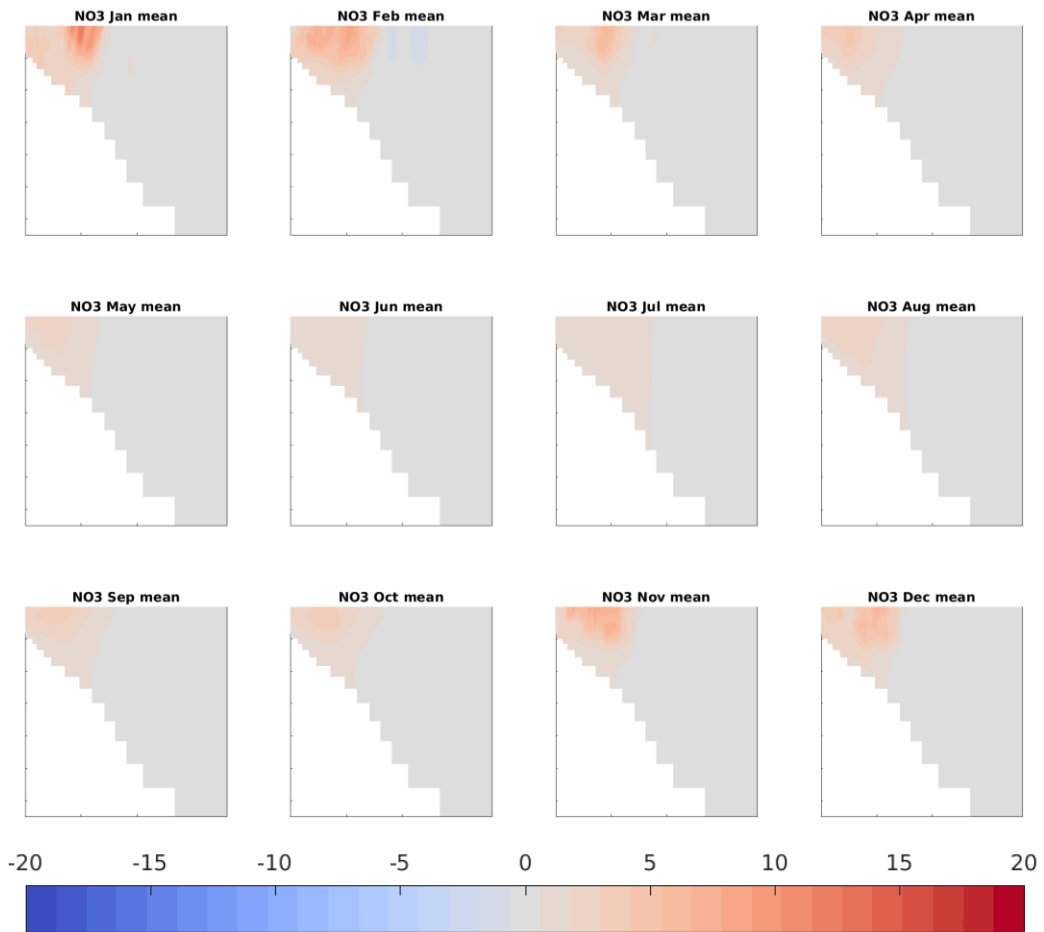
#1 Hindcast simulation - Scenario #3 Pre-Storm Bay (circa 2013) % Change



#1 Hindcast simulation - Scenario #3 Pre-Storm Bay (circa 2013) % Change

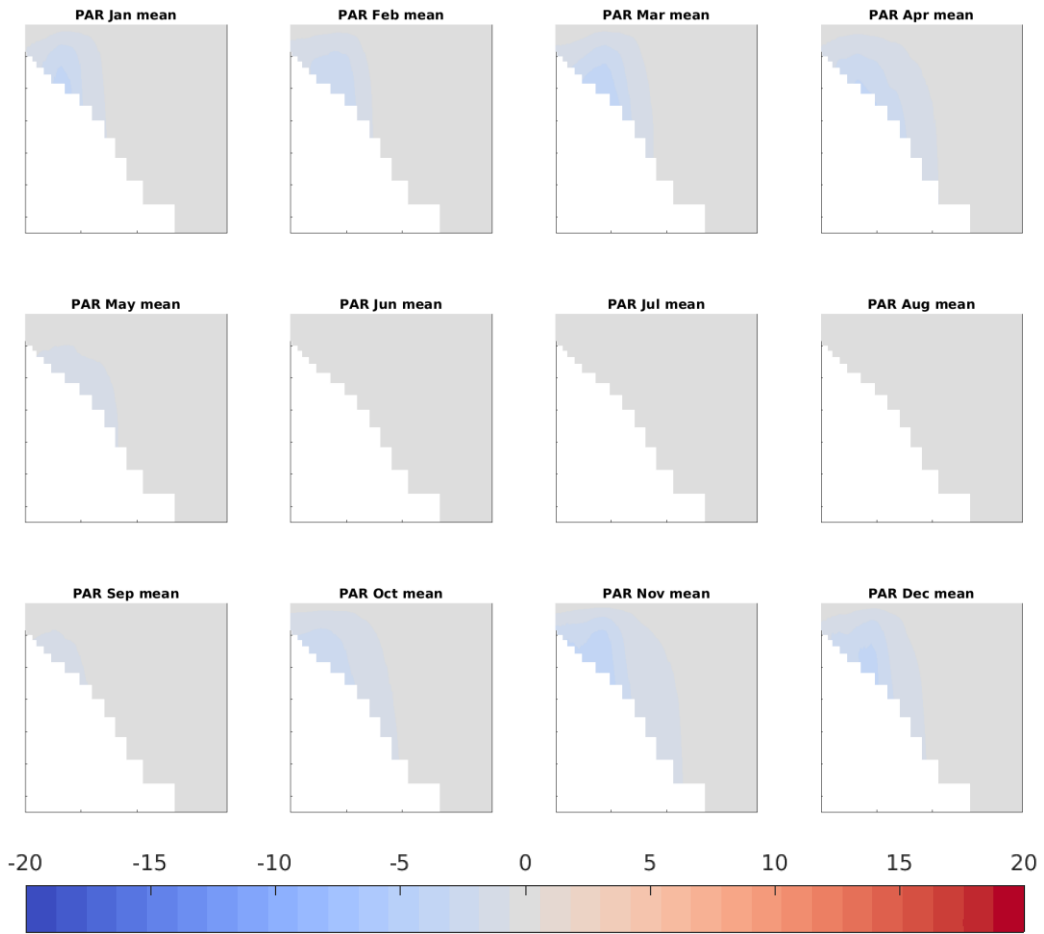


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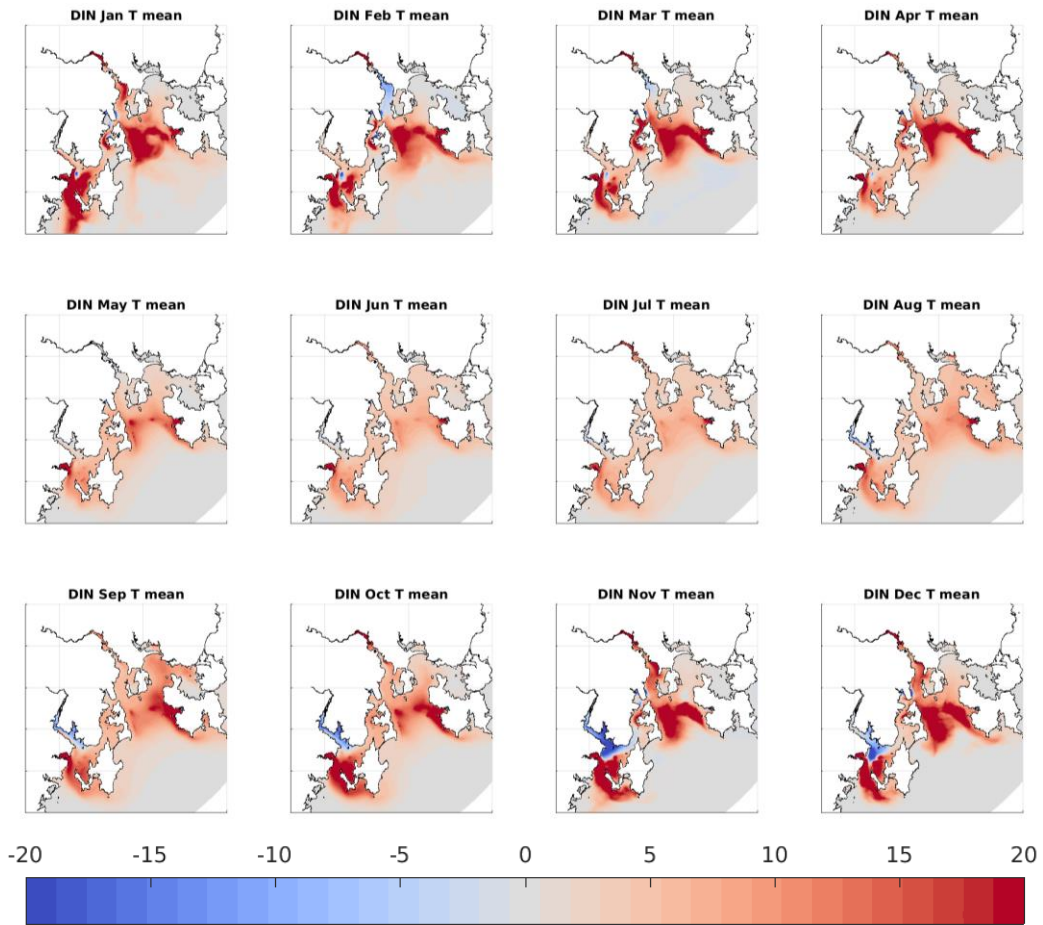


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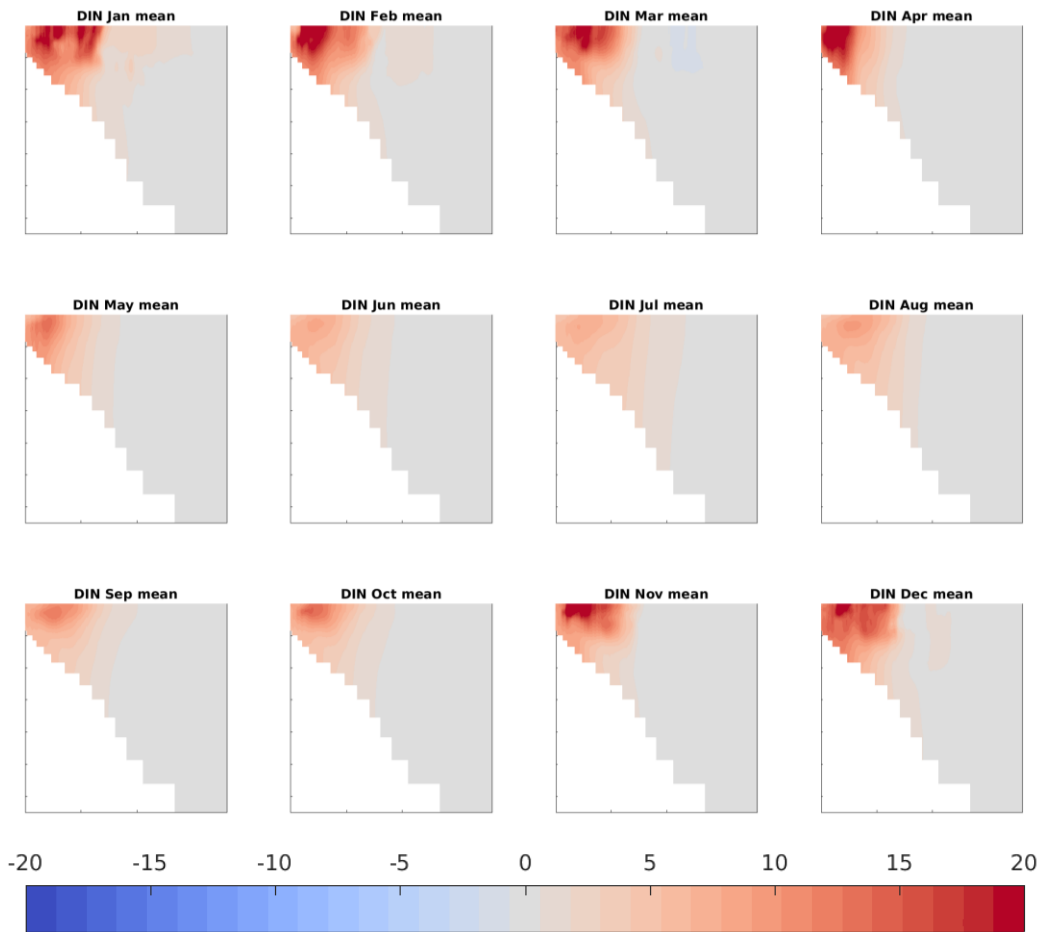




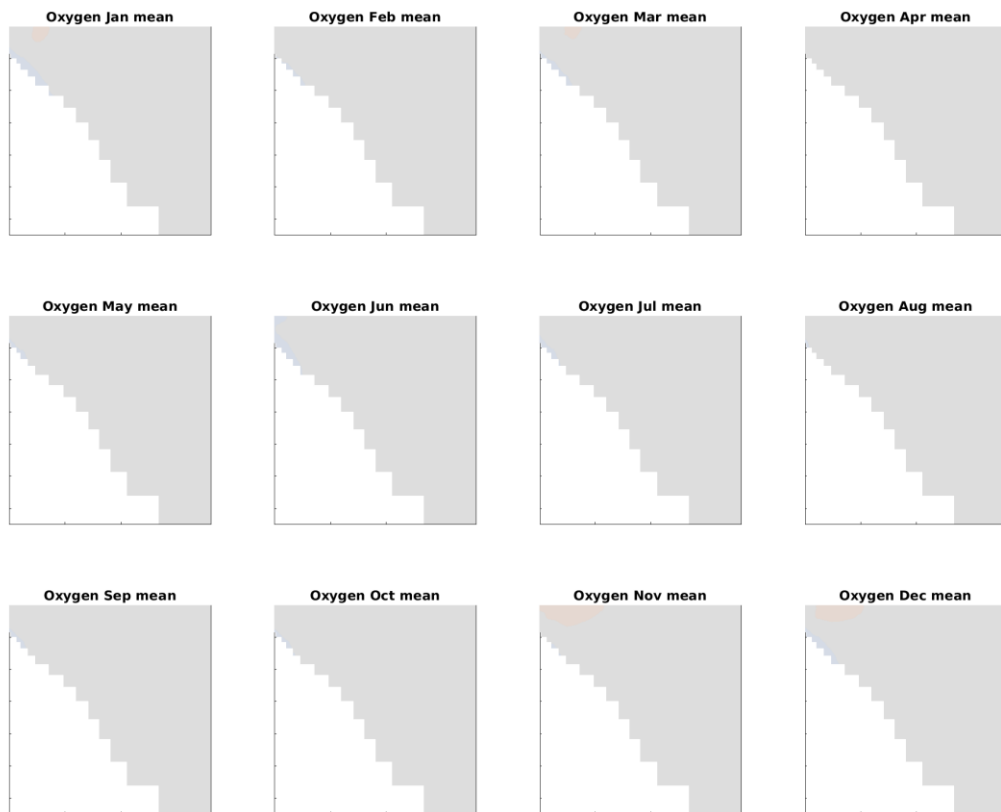
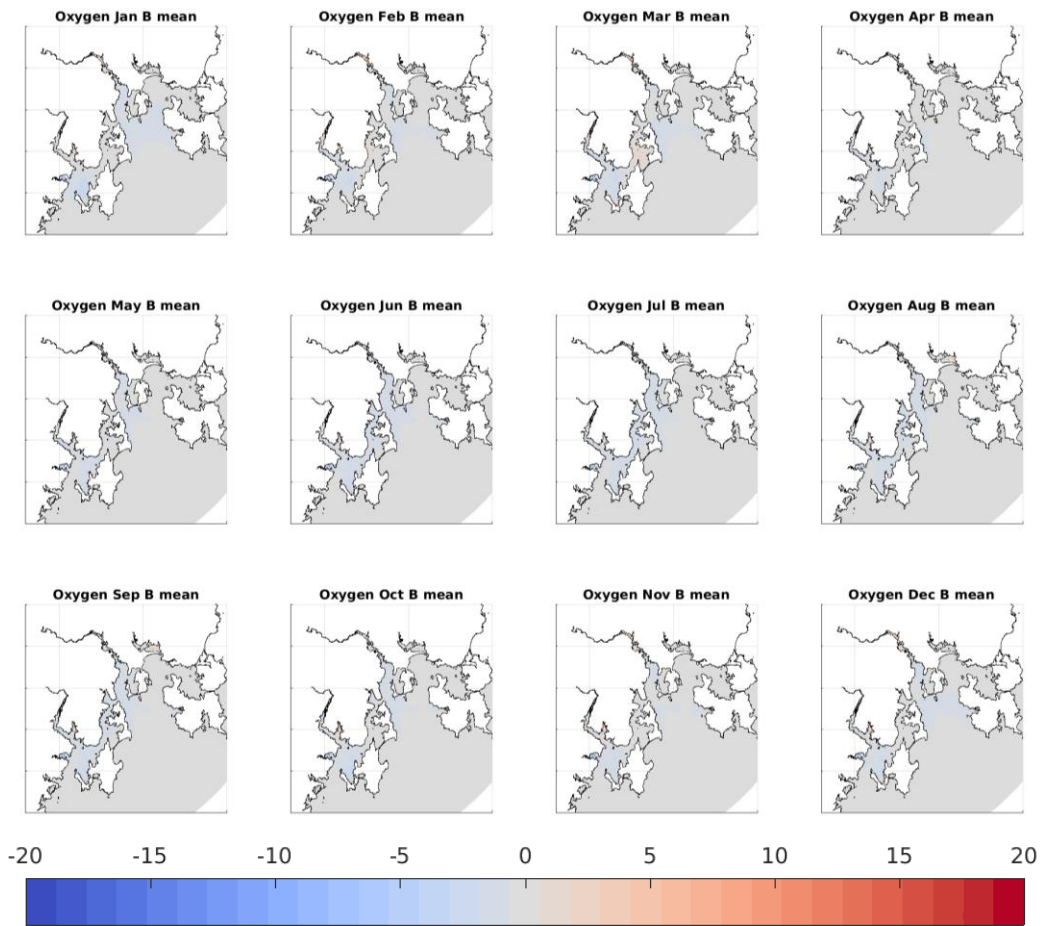
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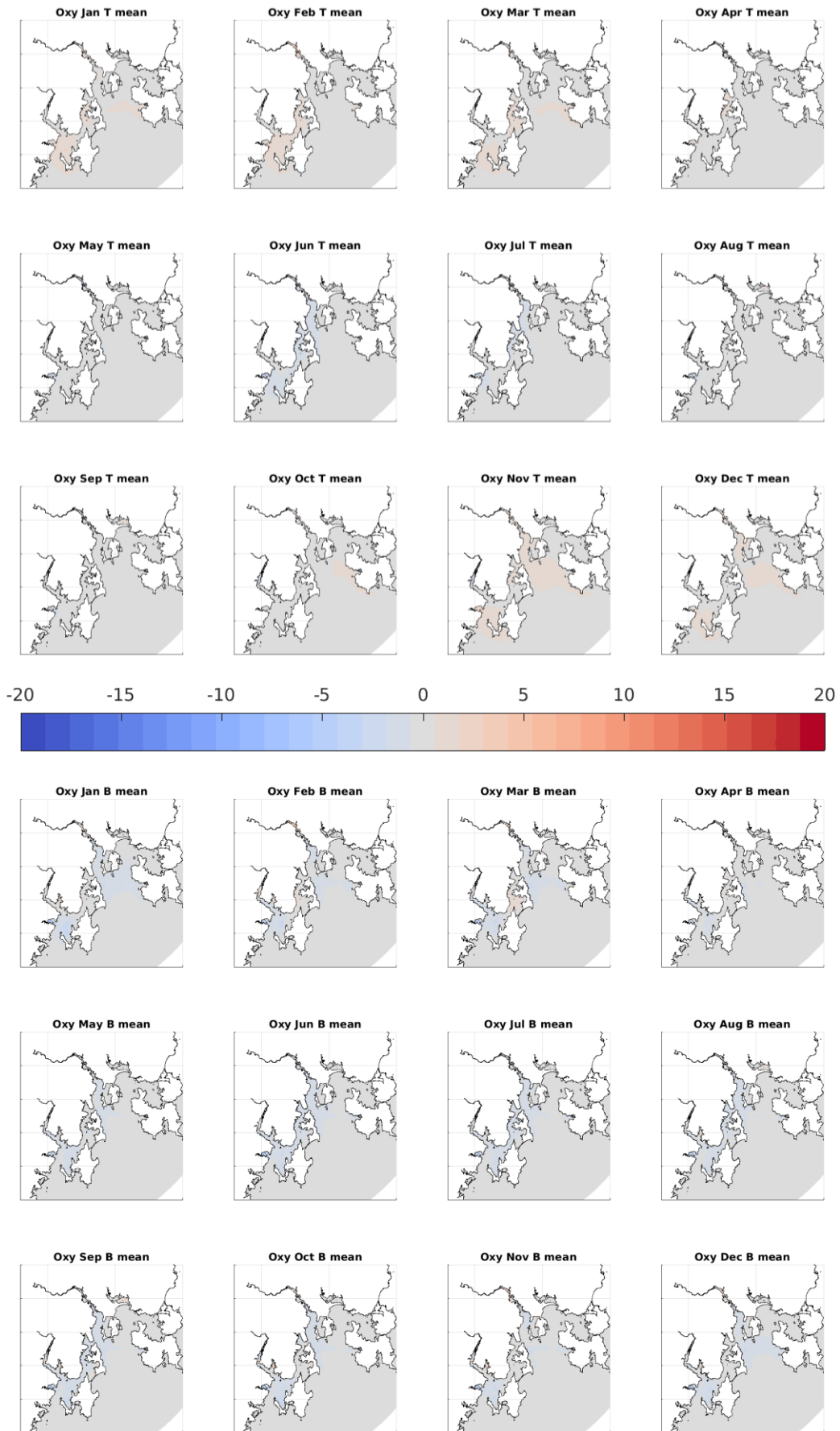
Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



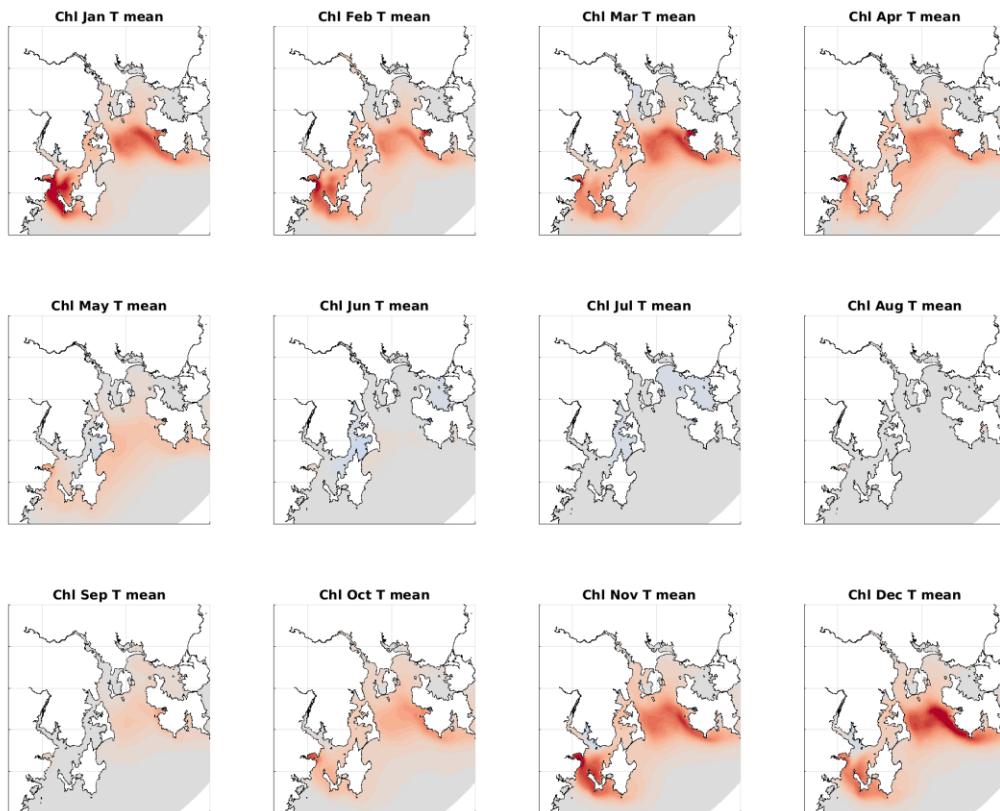
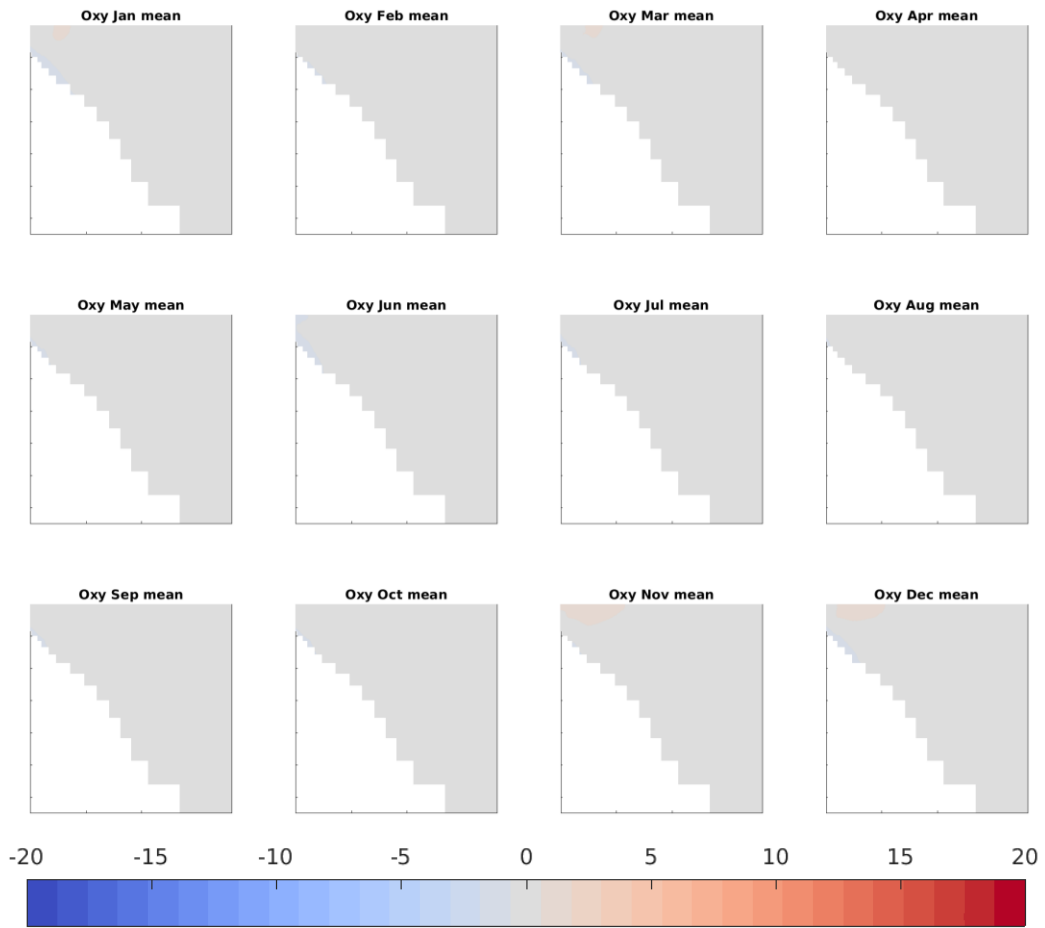
Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



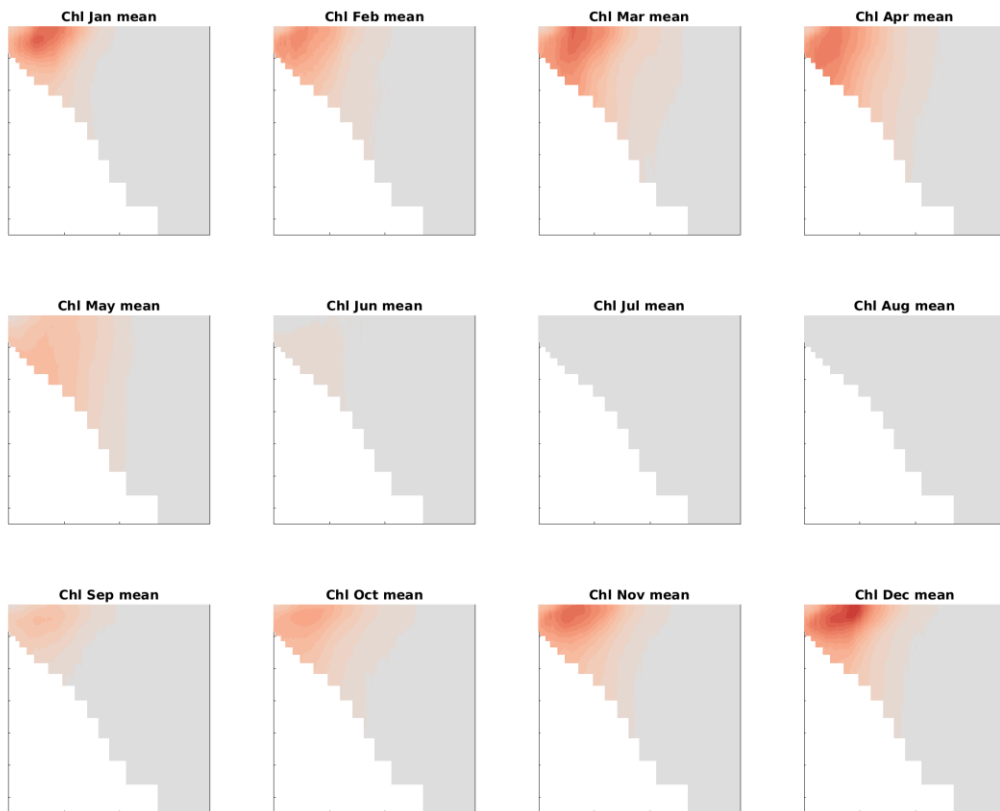
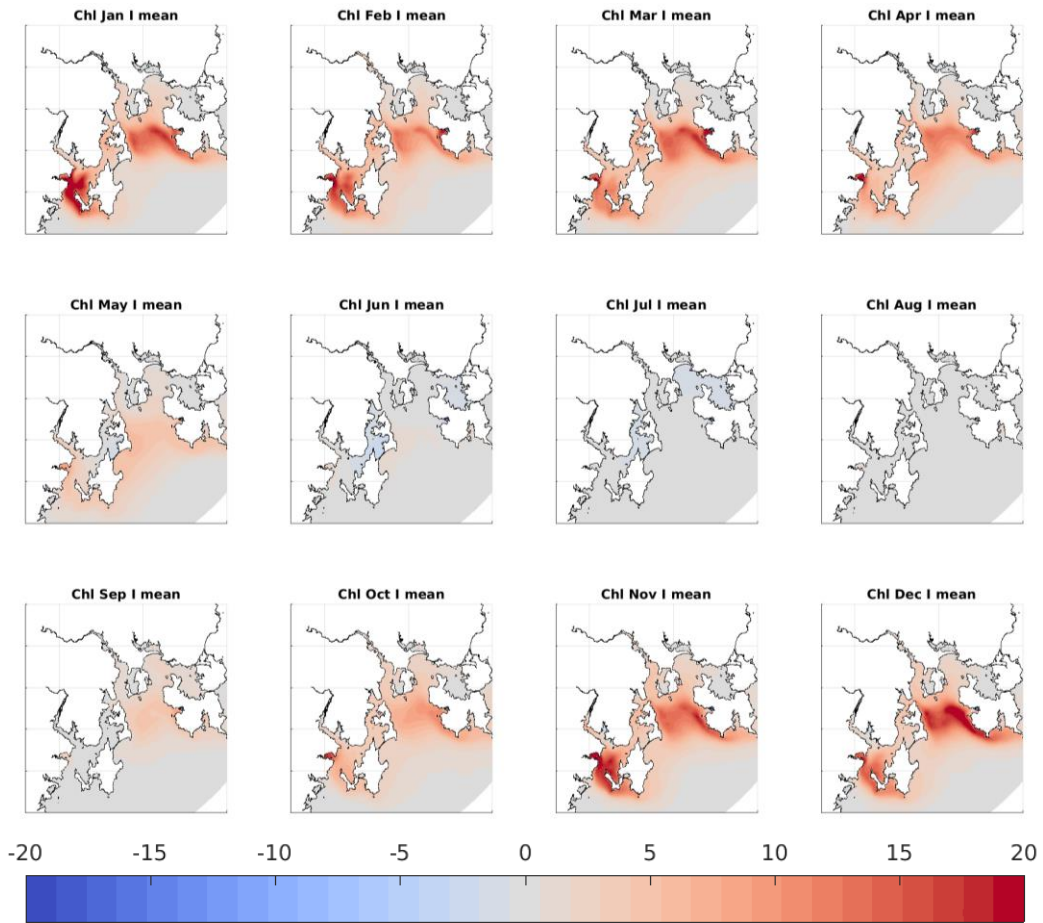
Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



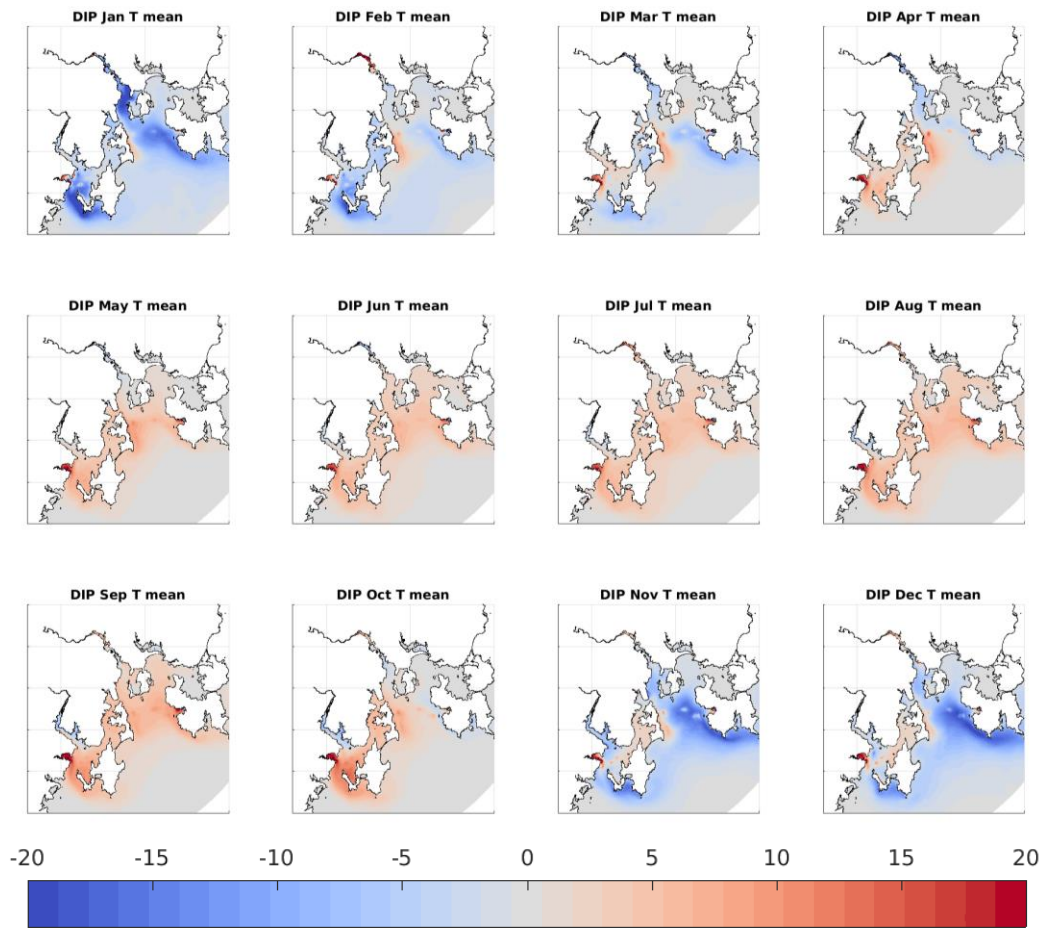
Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change

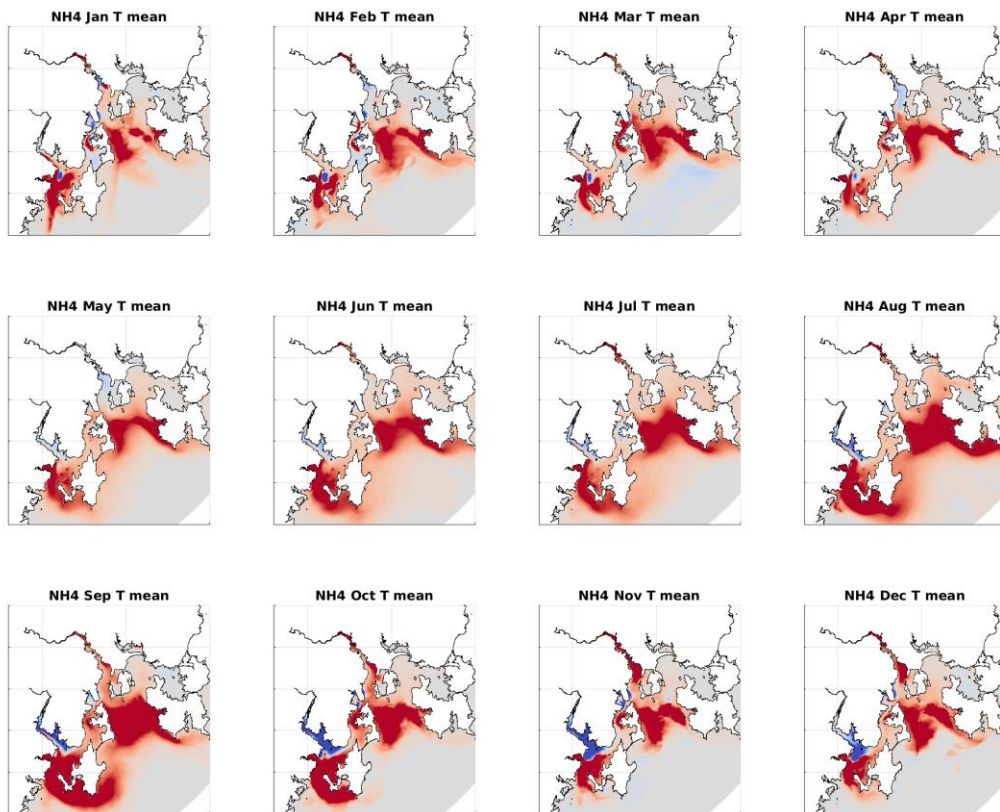
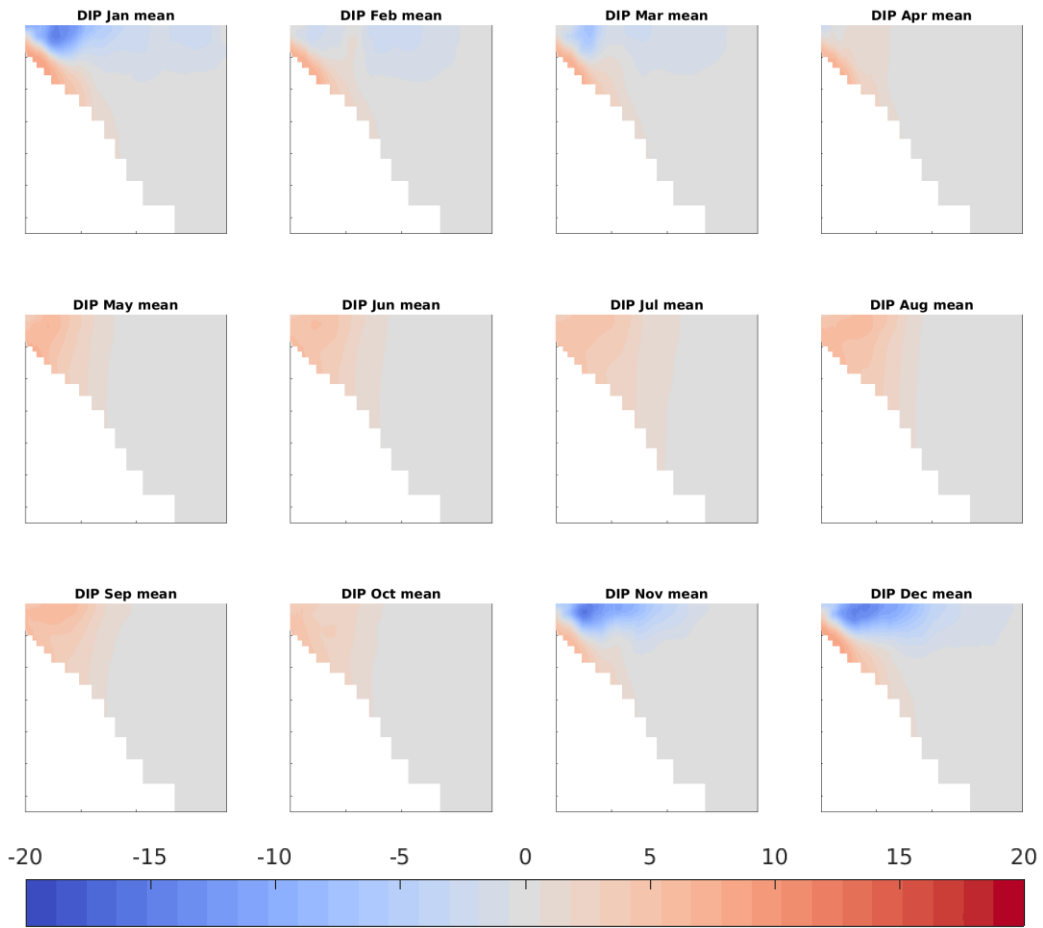


Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change

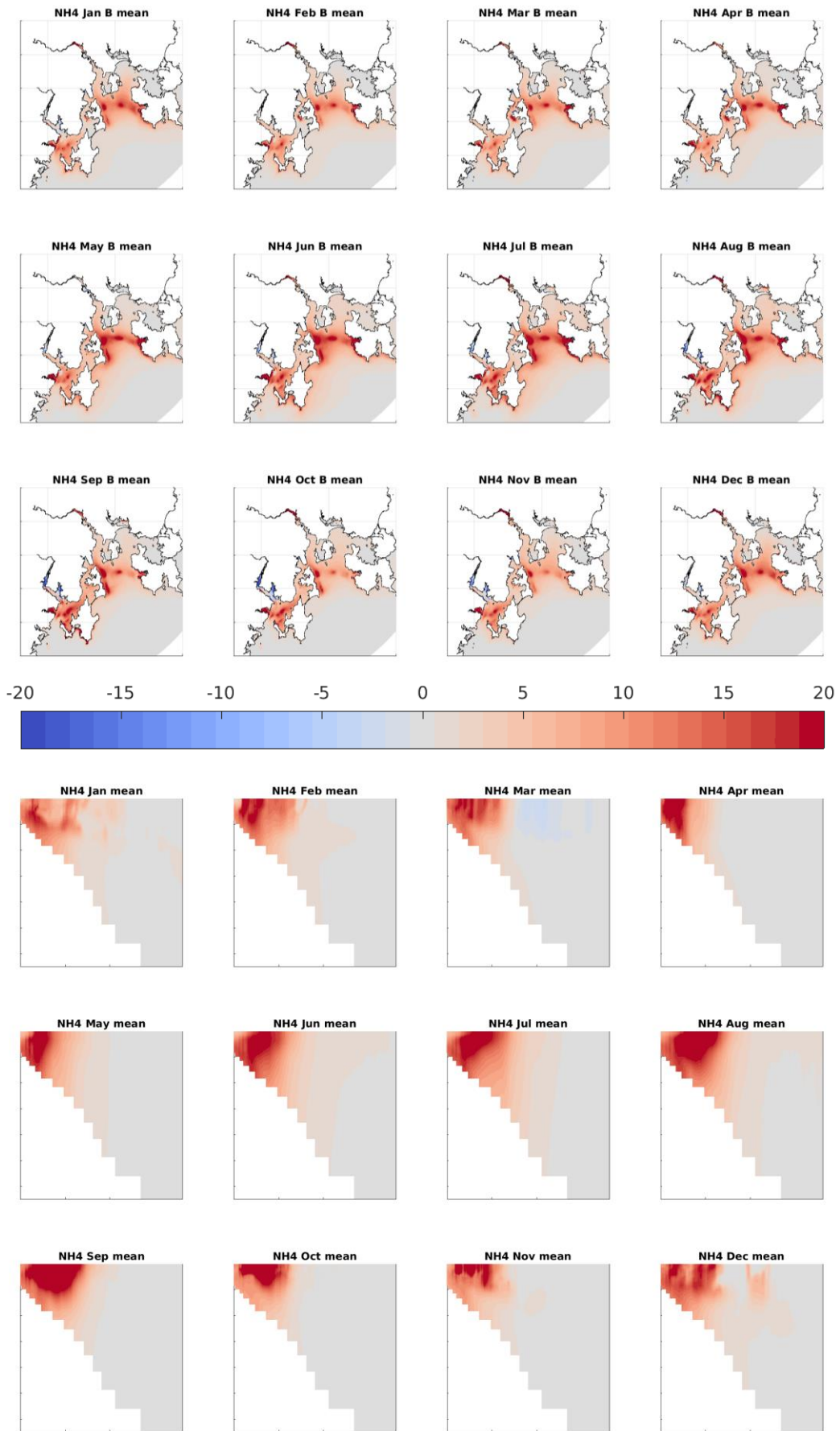


Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change

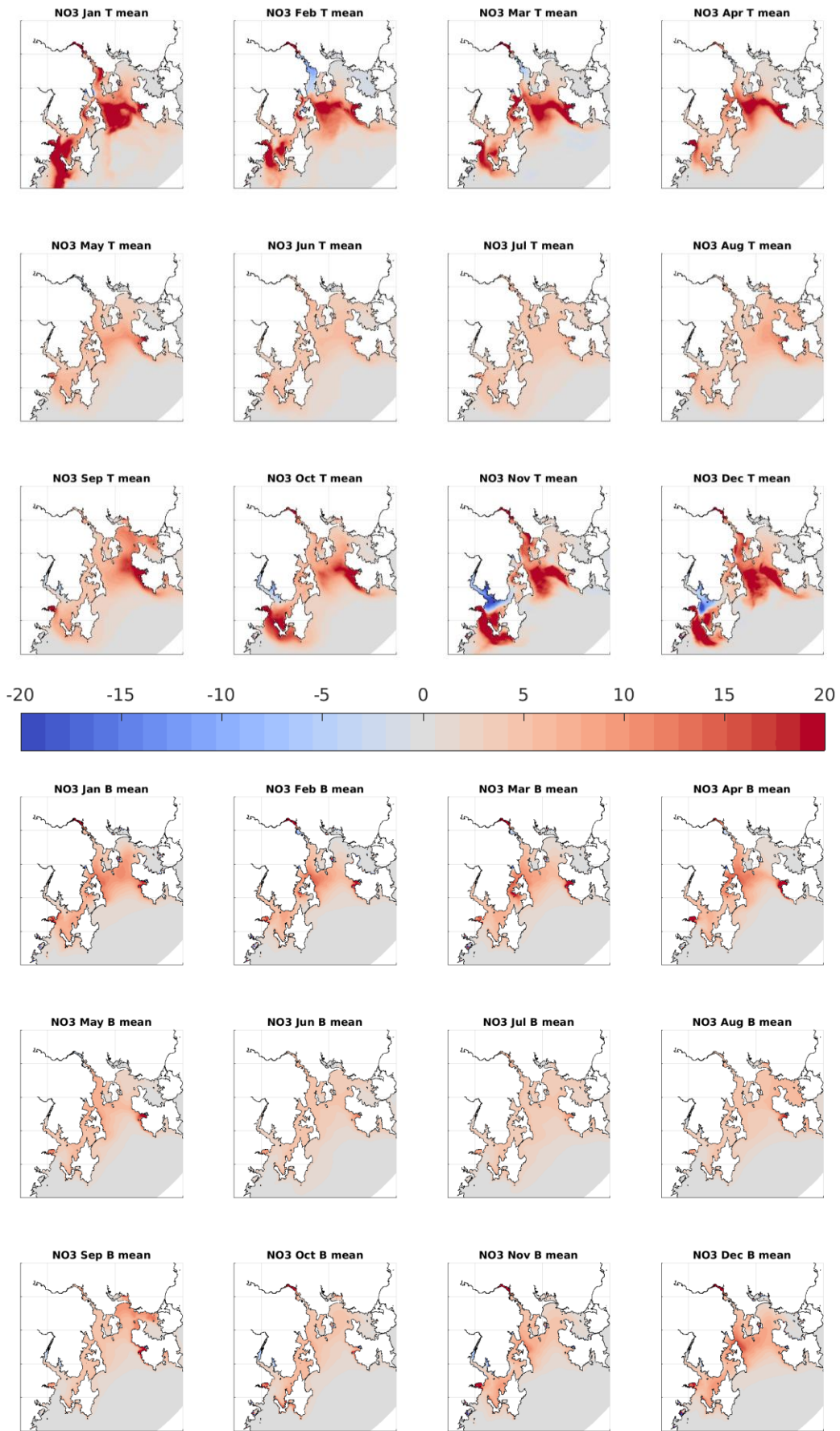




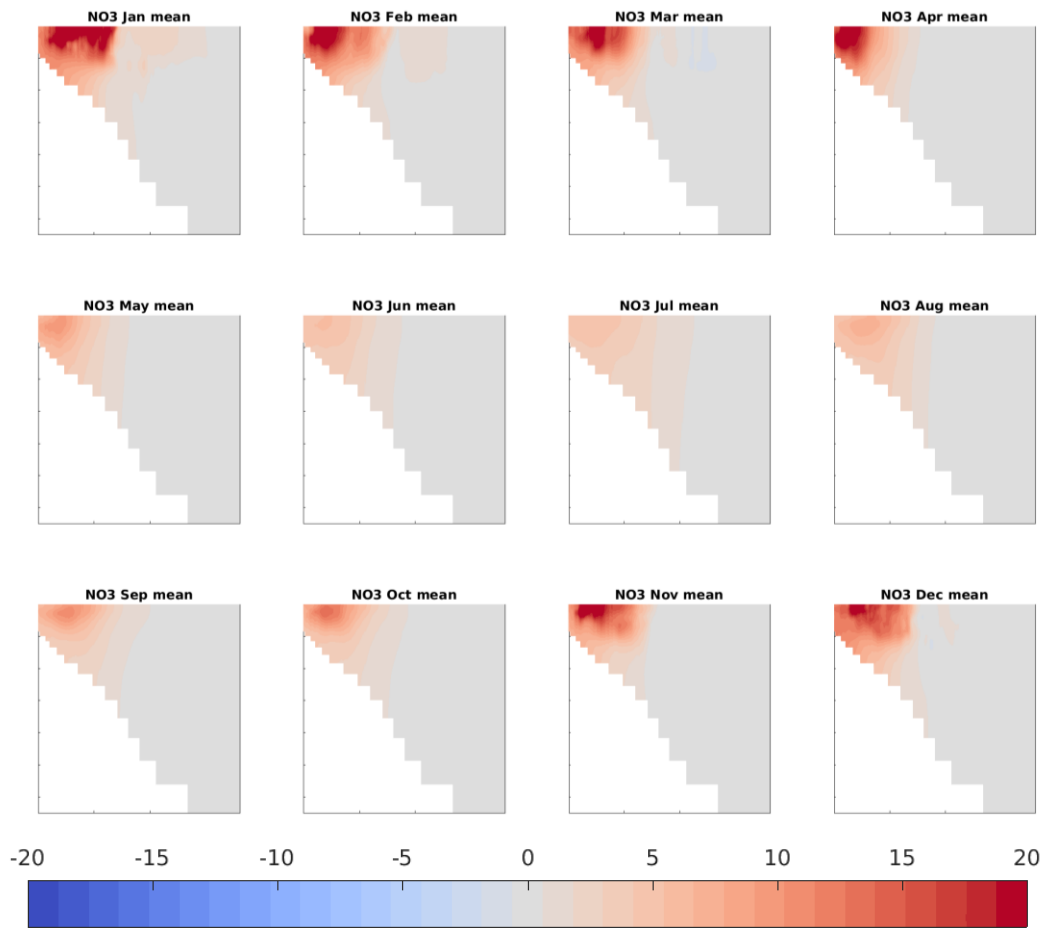
Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



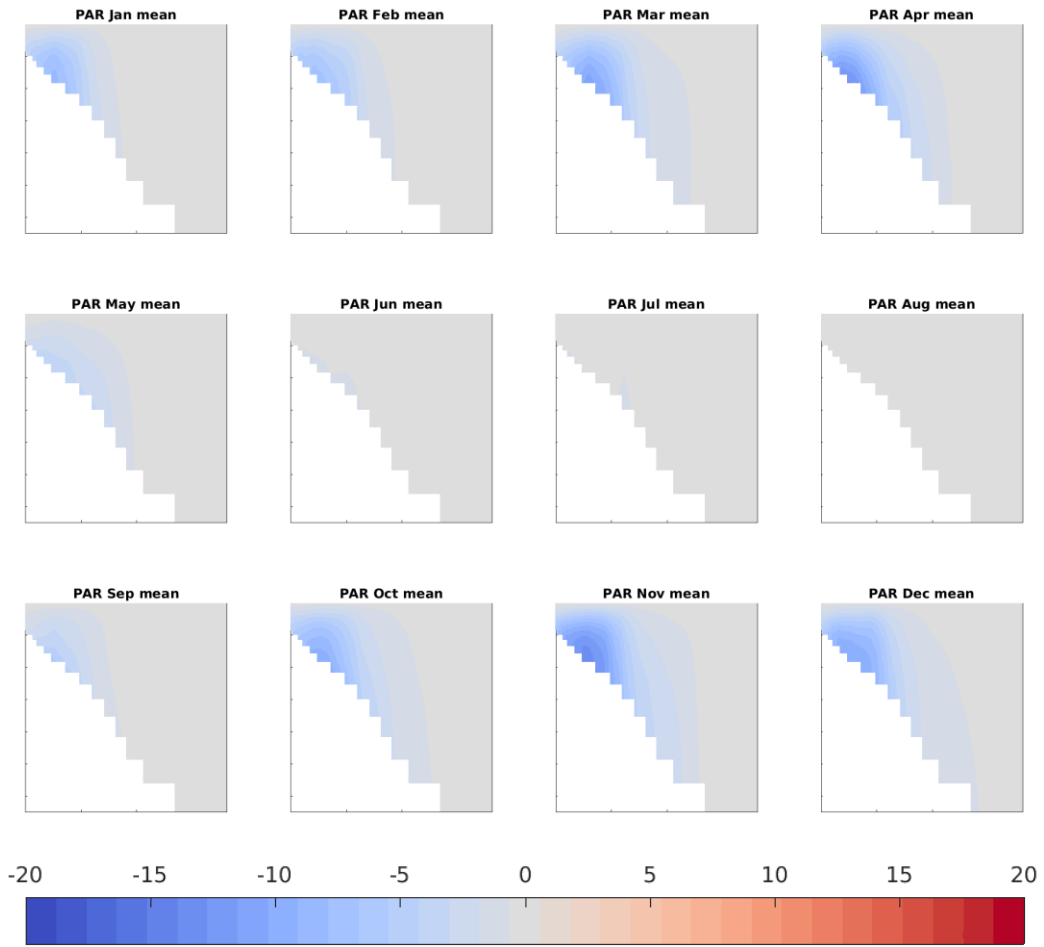
Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



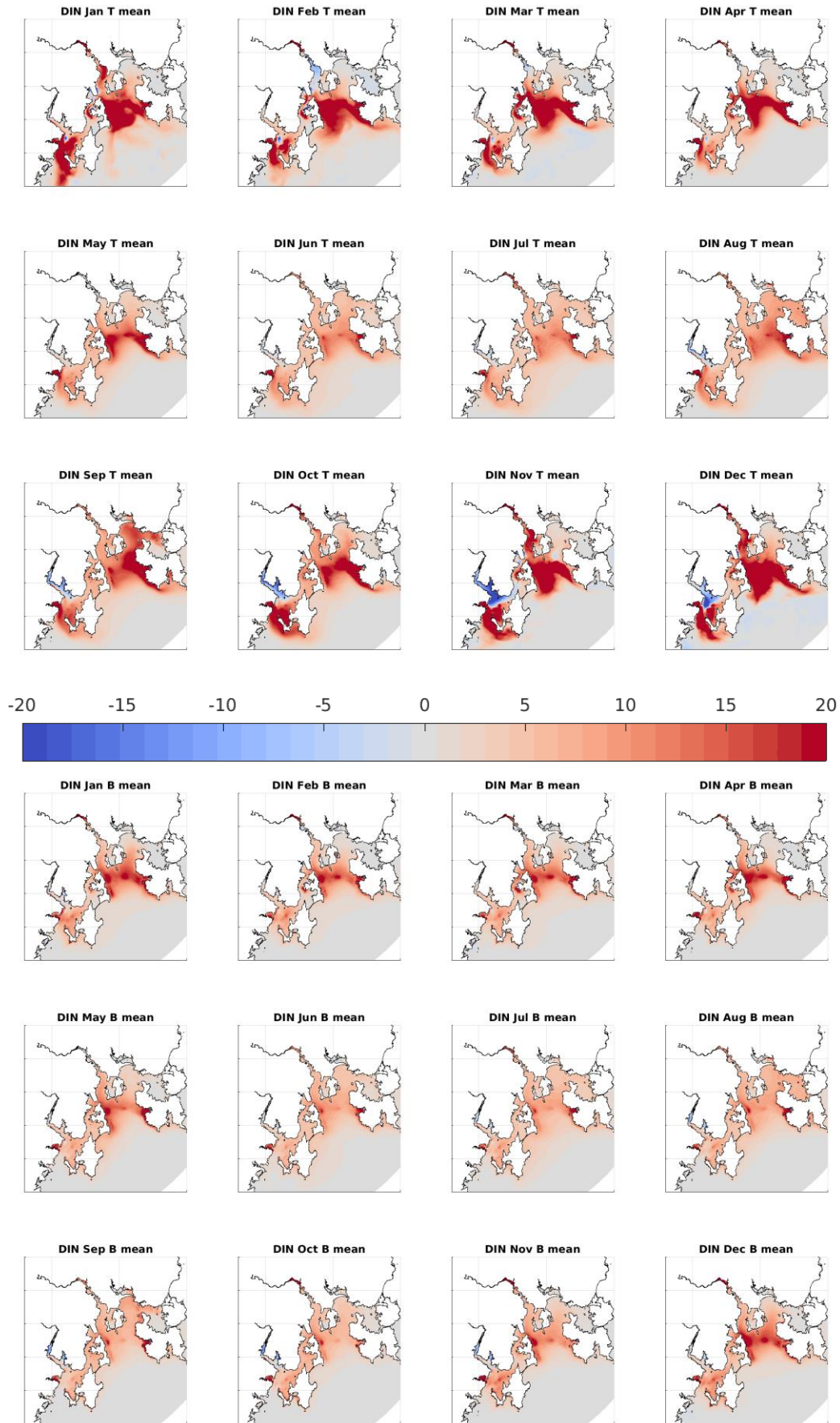
Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



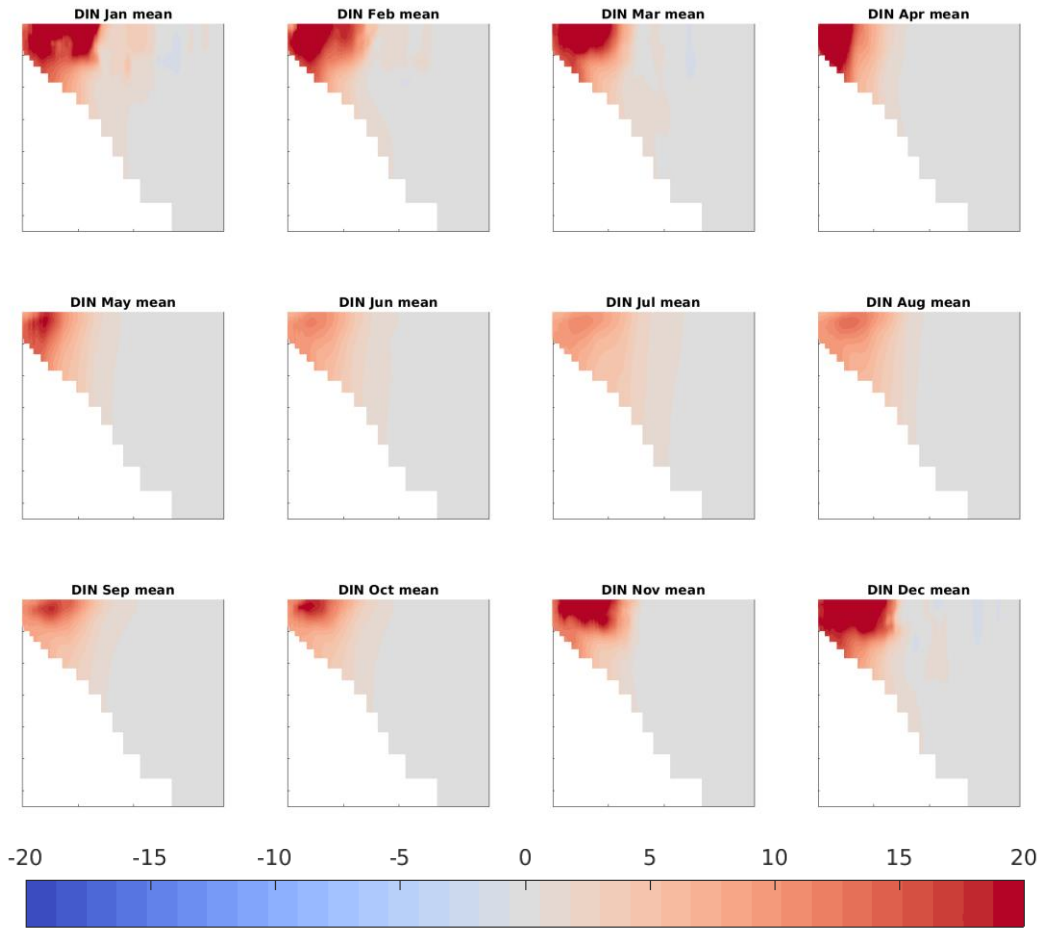
Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



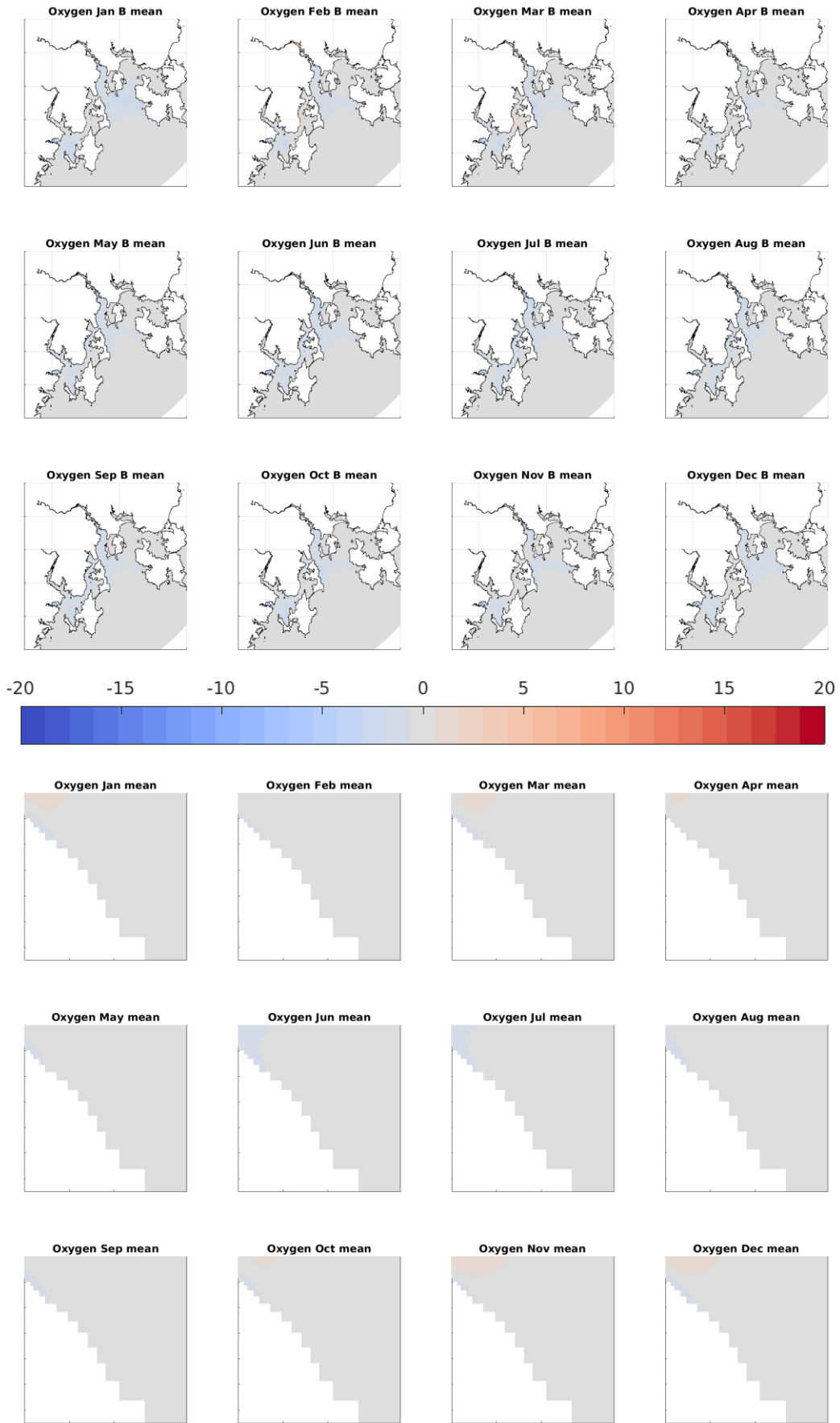
Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change

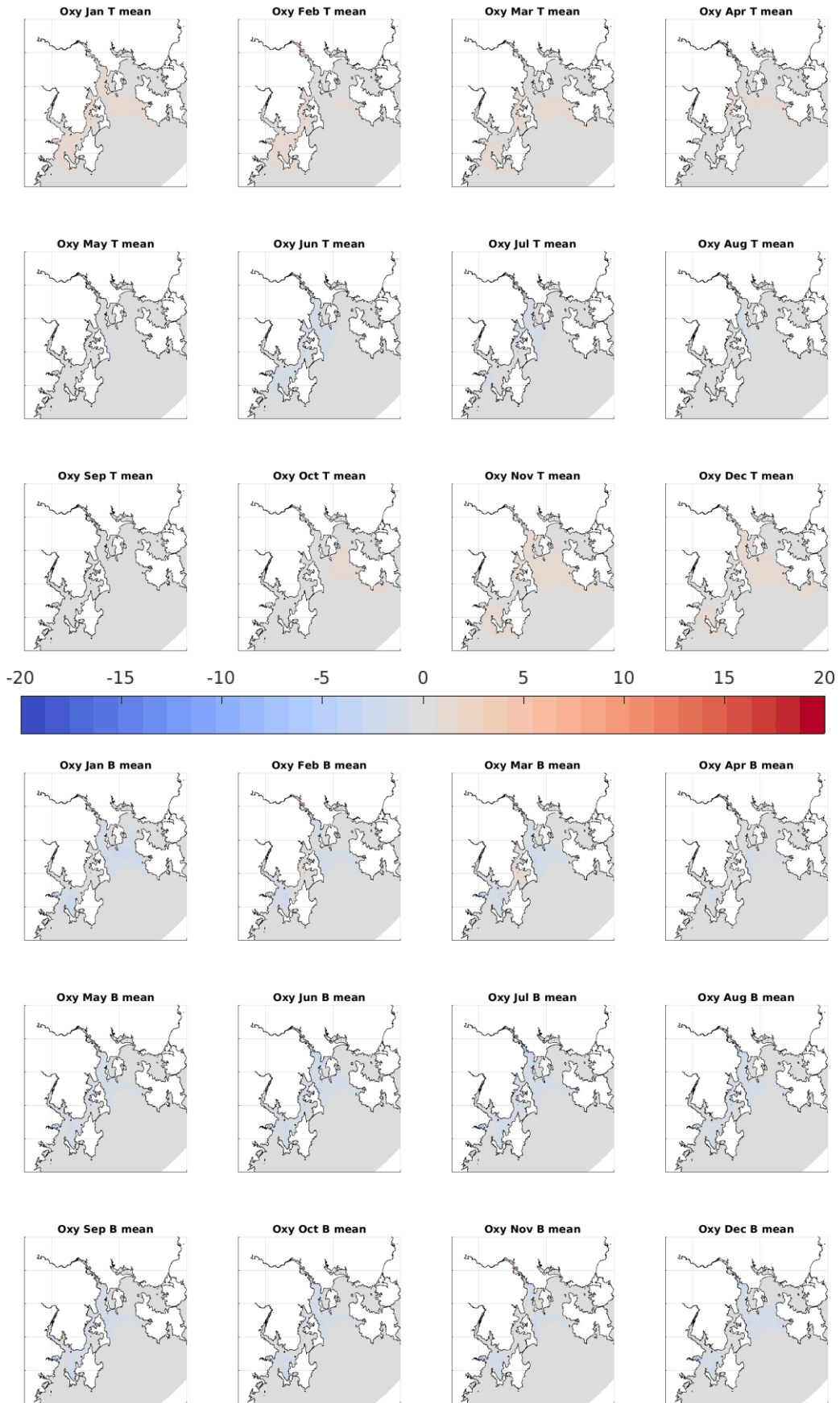


Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change

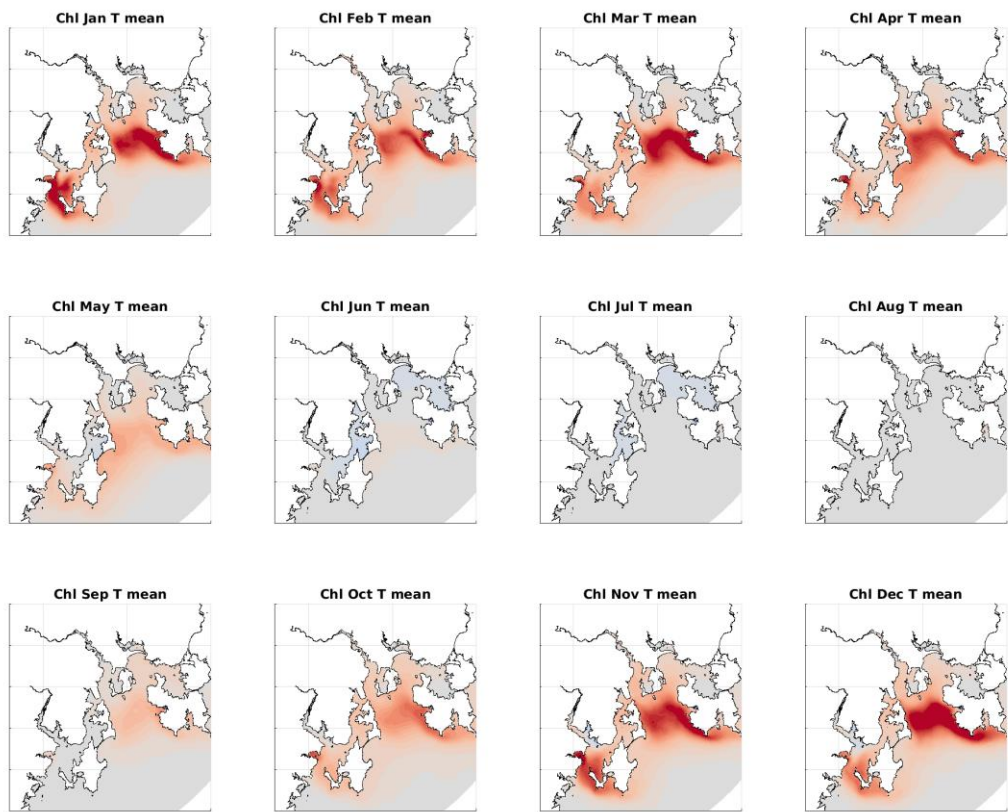
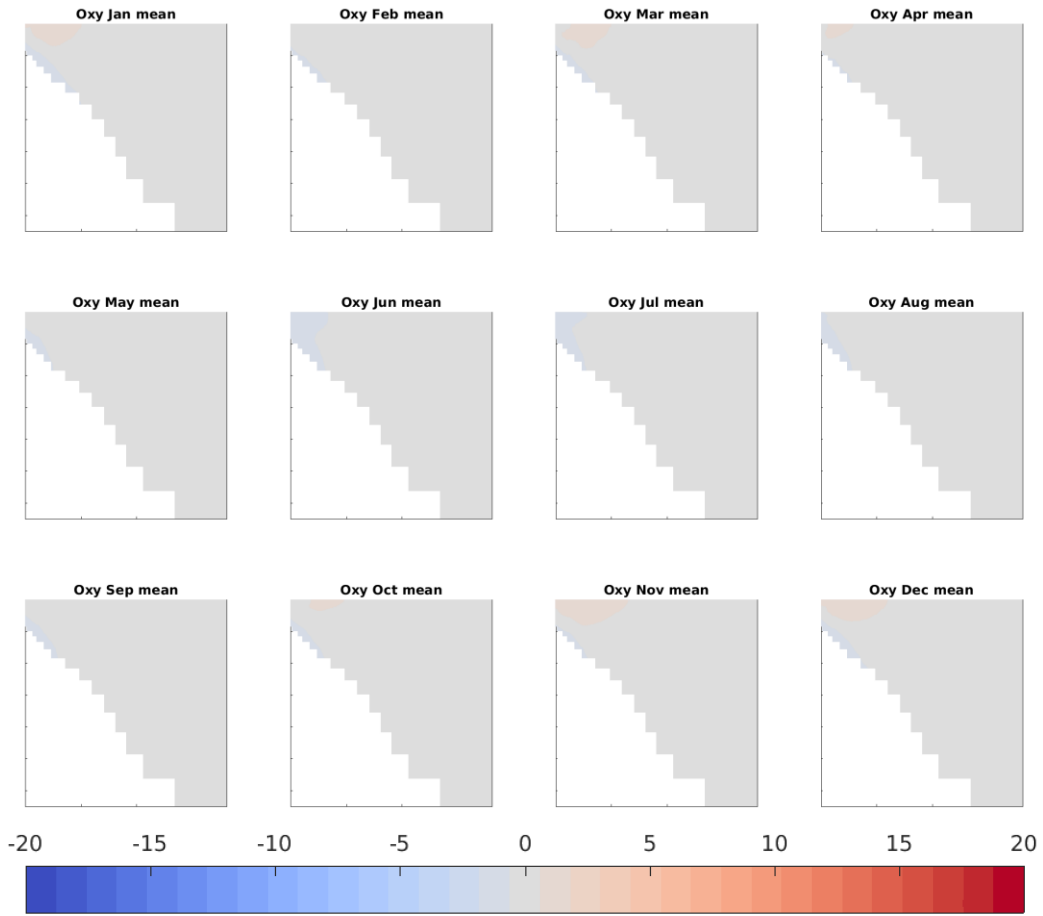


Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change

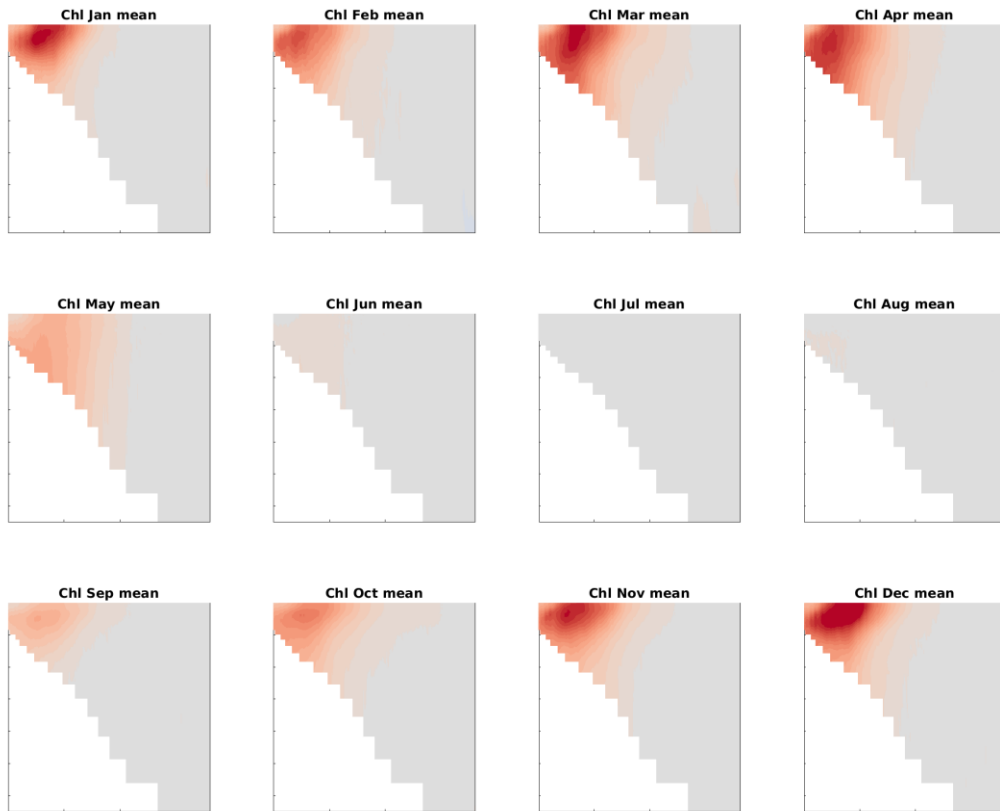
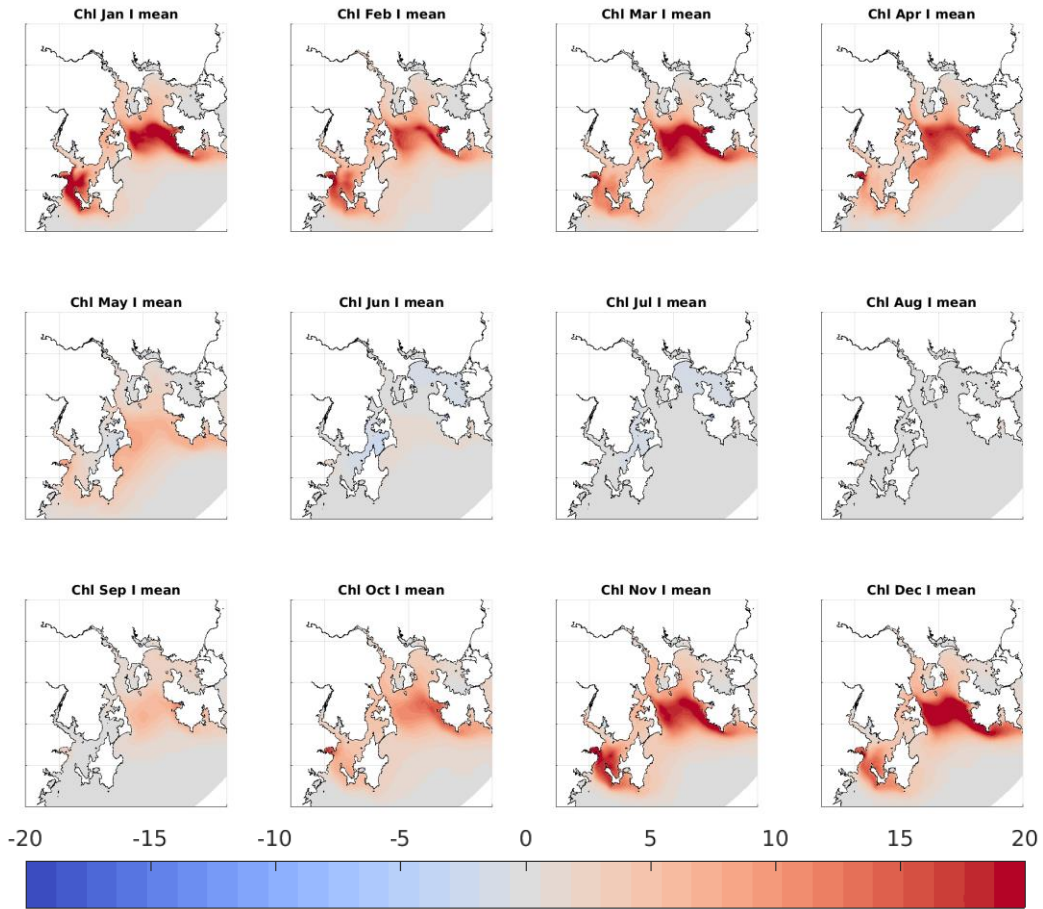




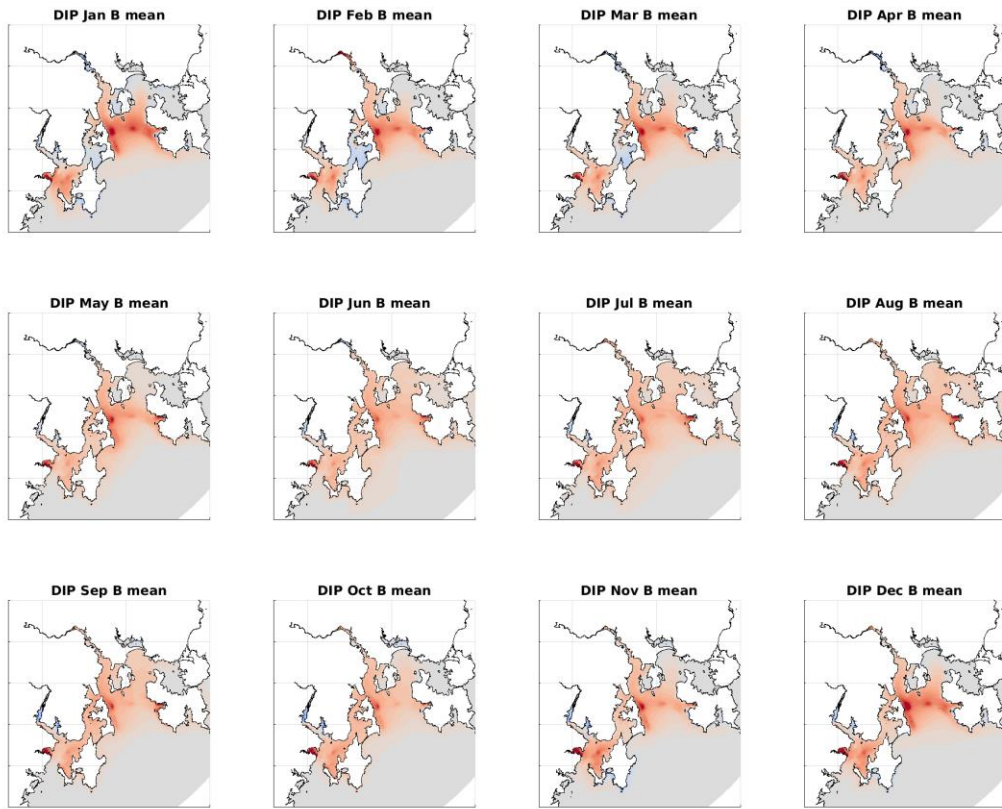
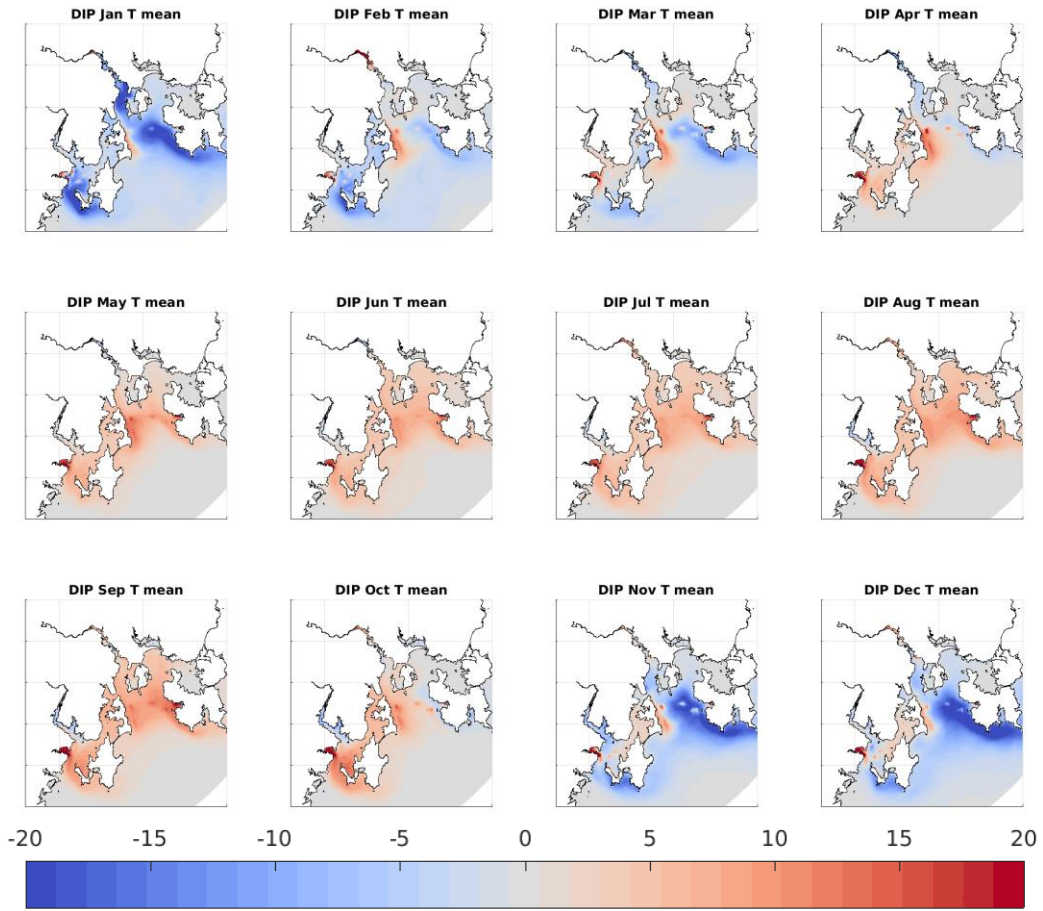
Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



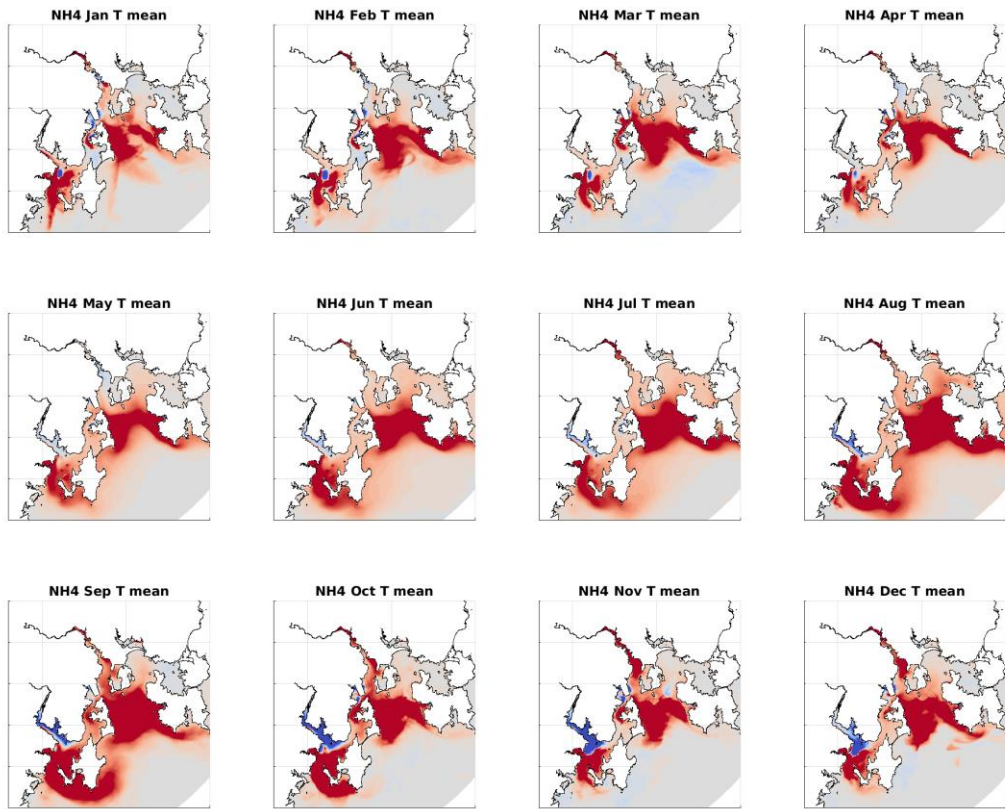
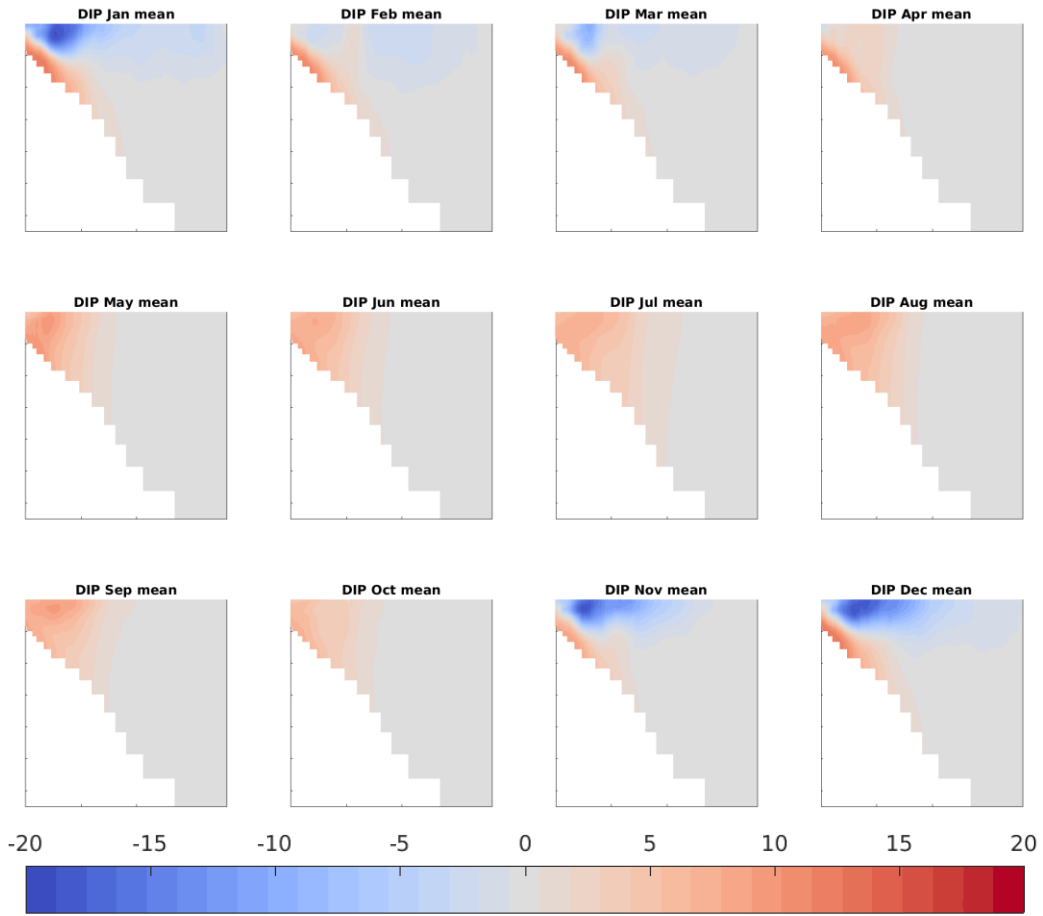
Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



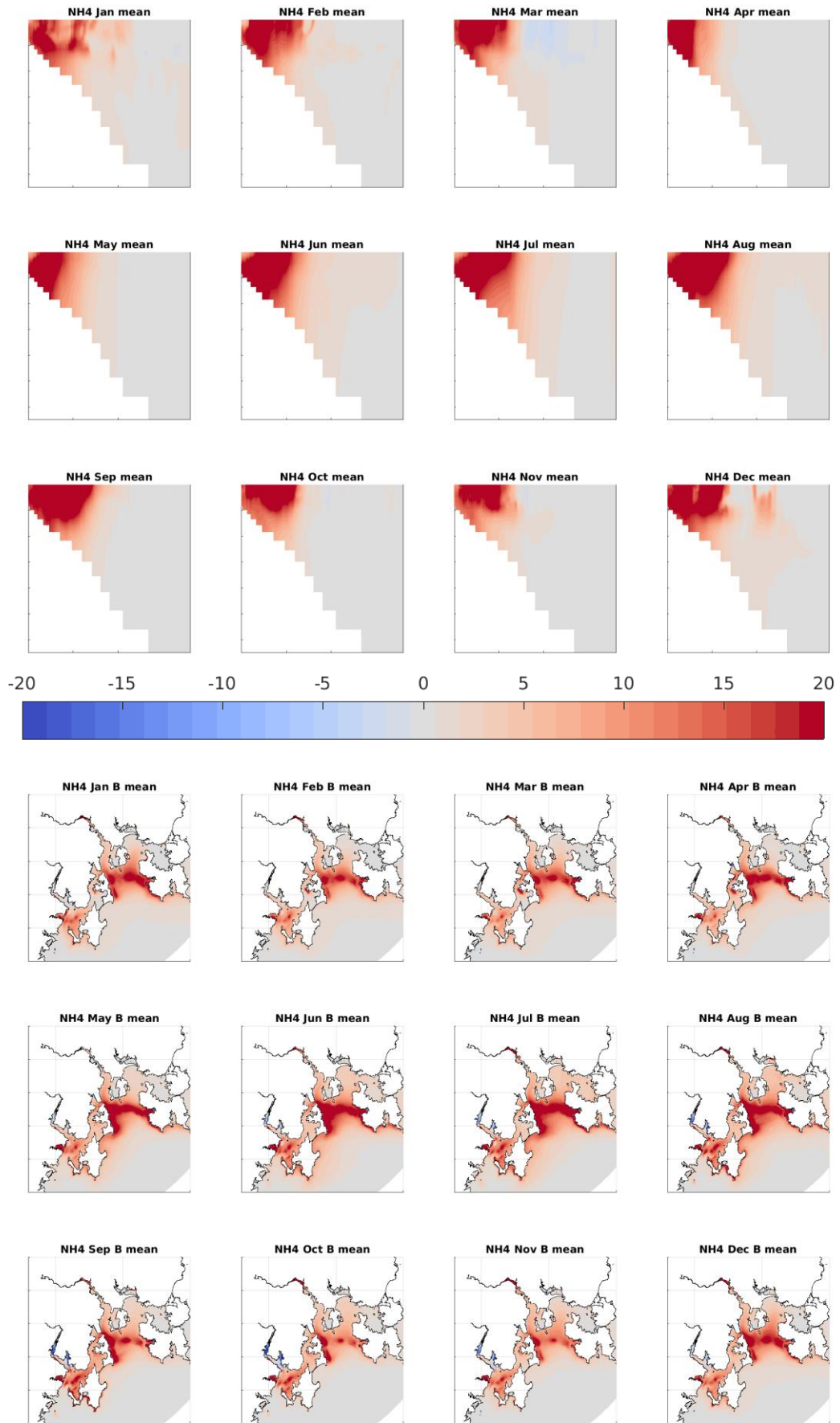
Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



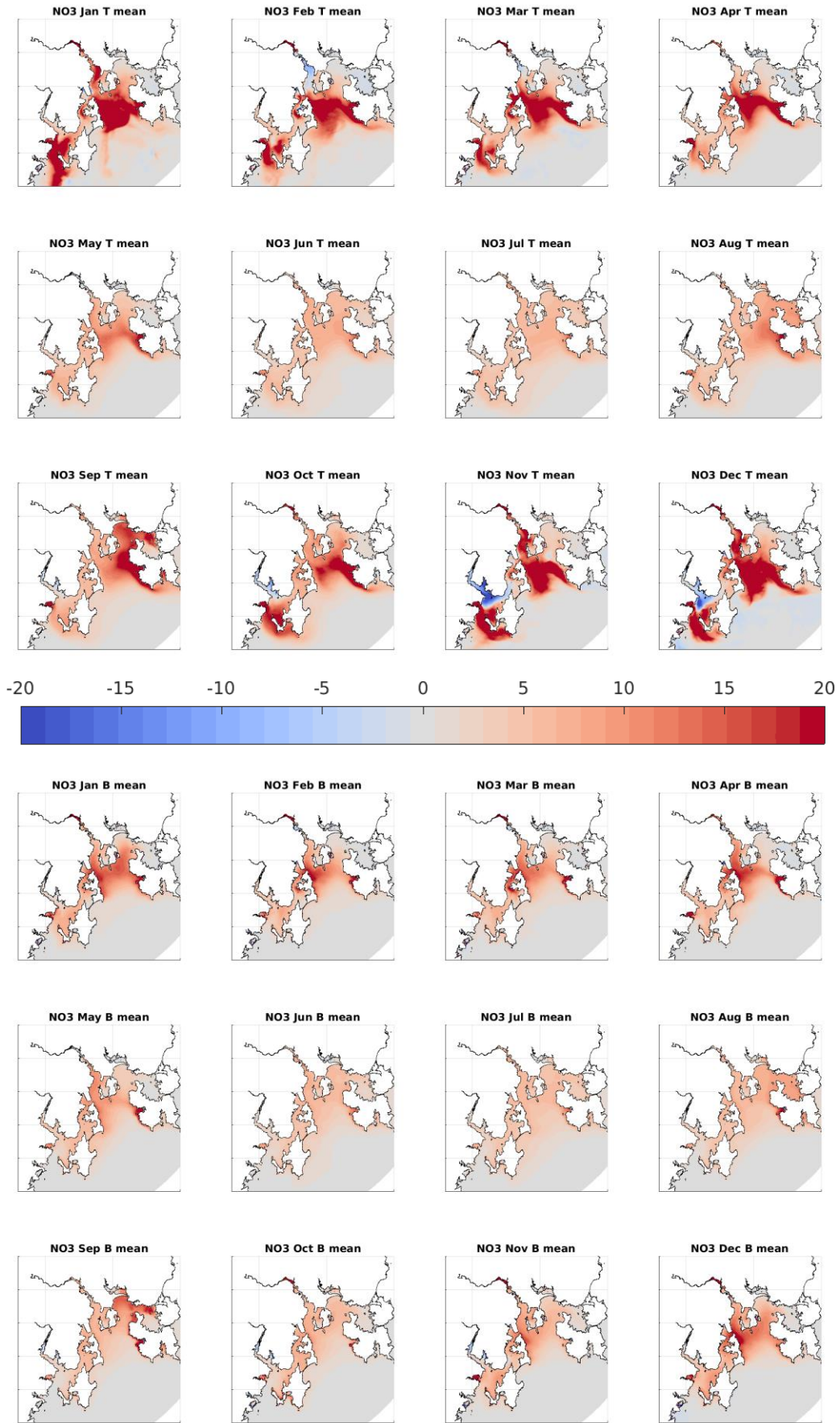
Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



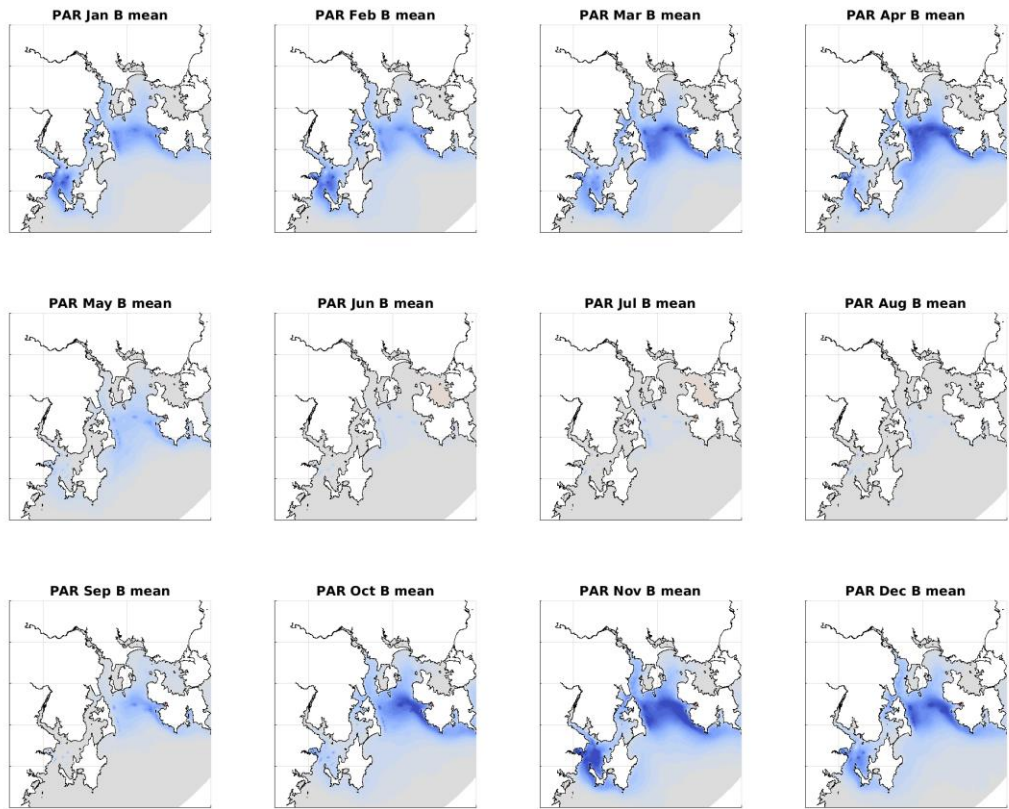
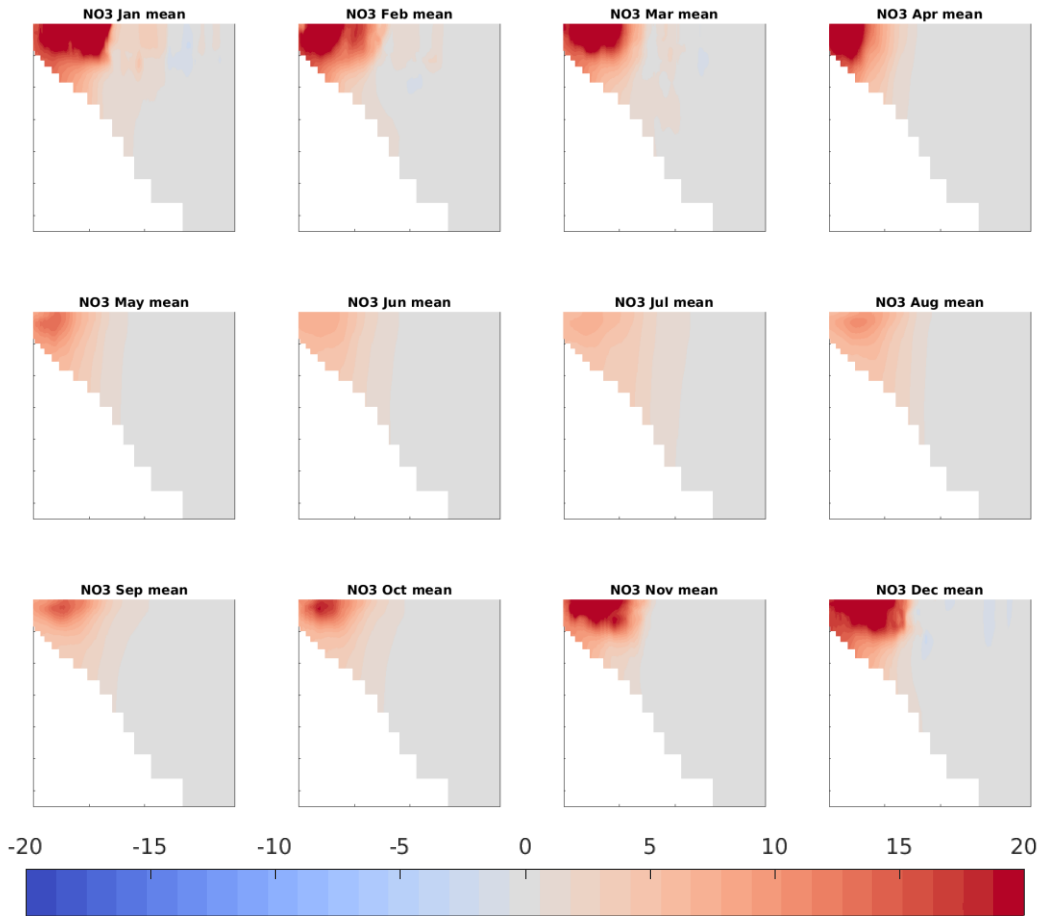
Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change

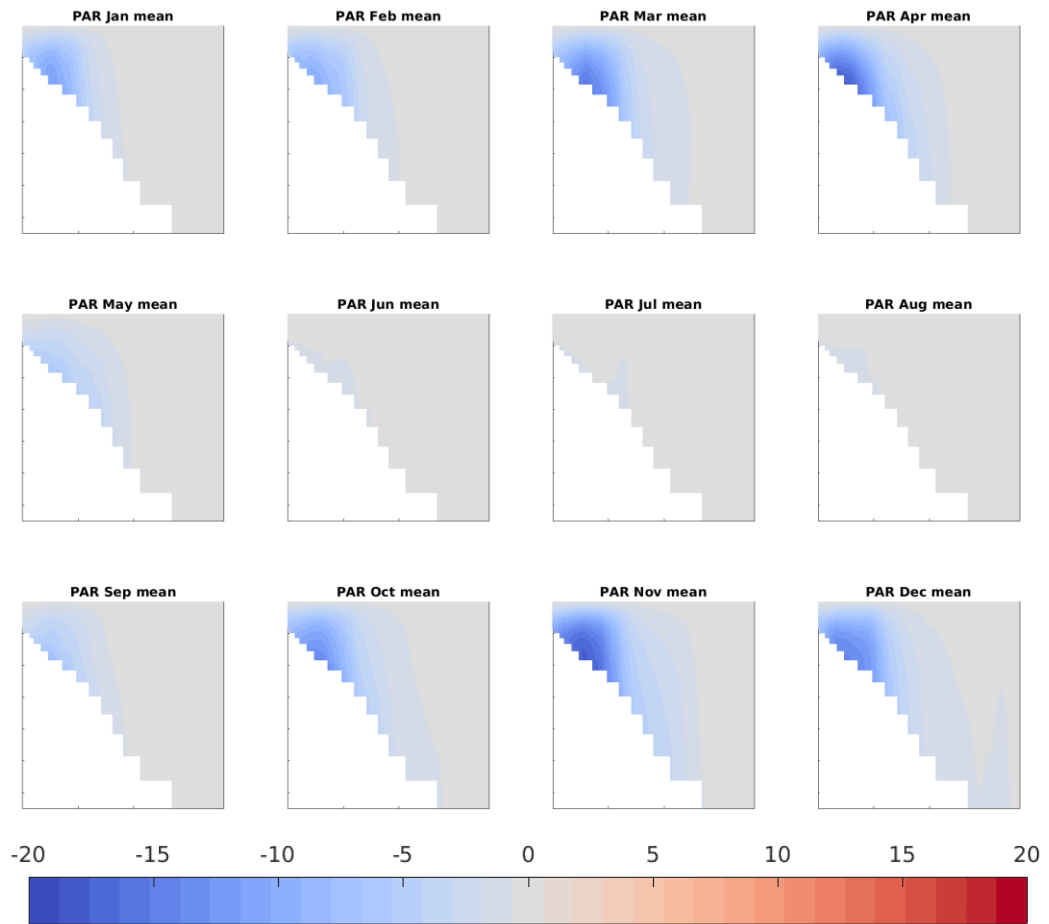


Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change

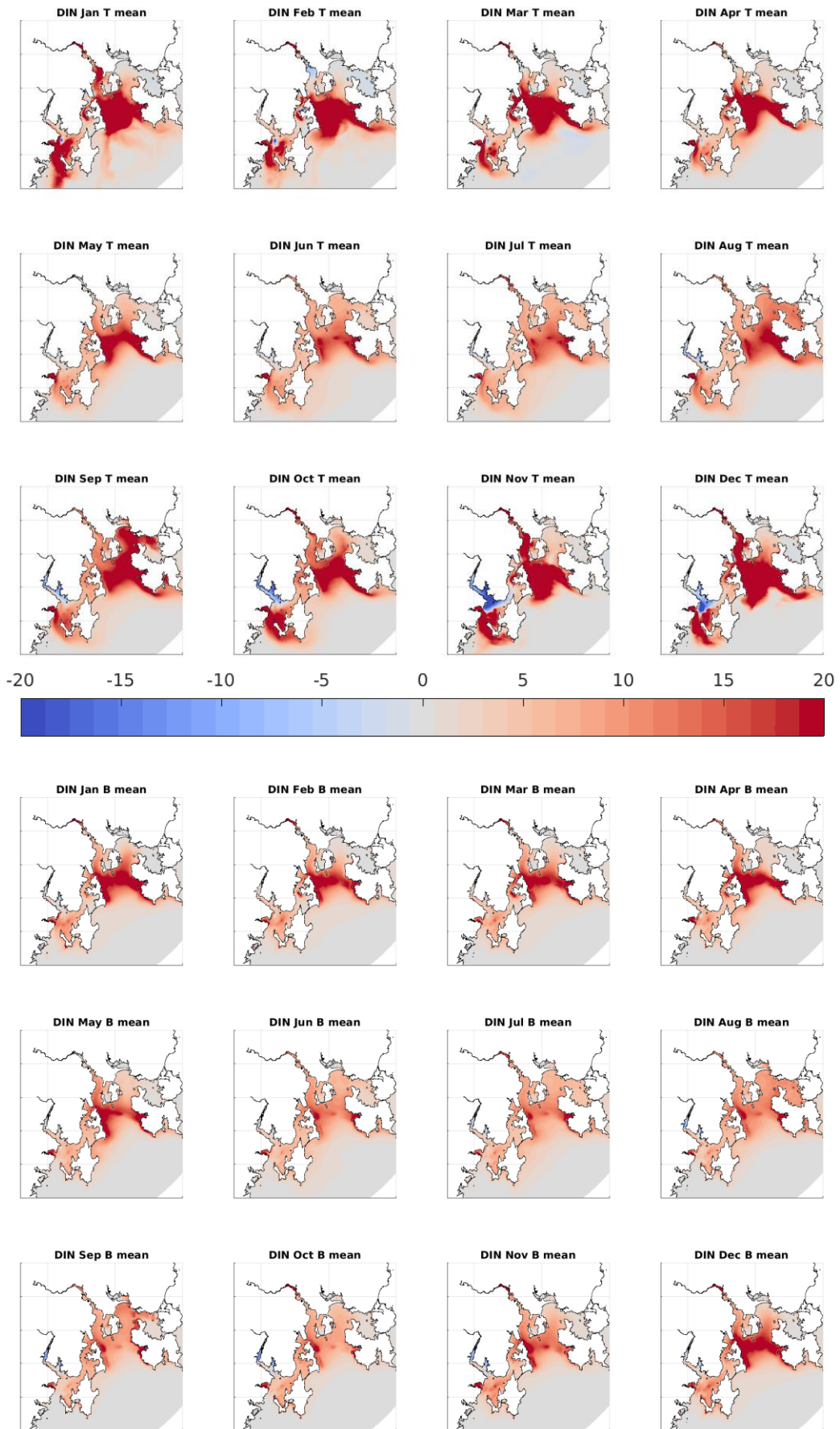


Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change

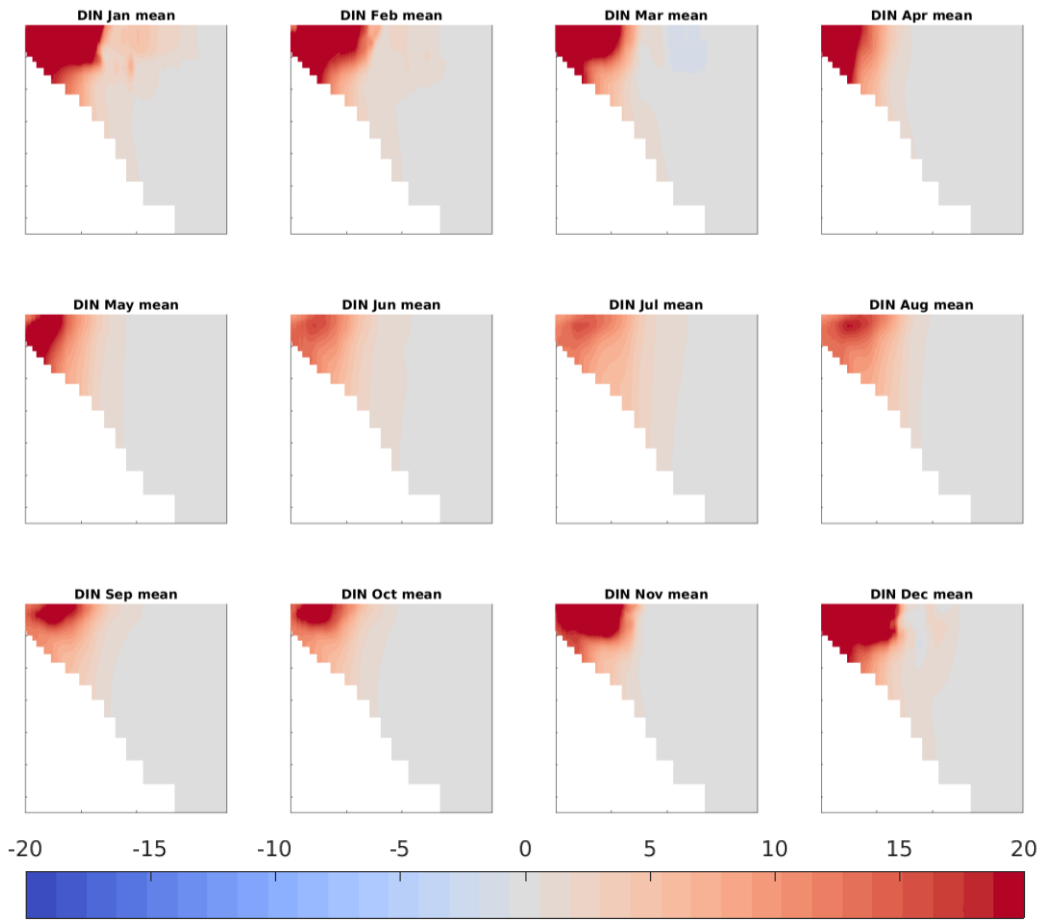




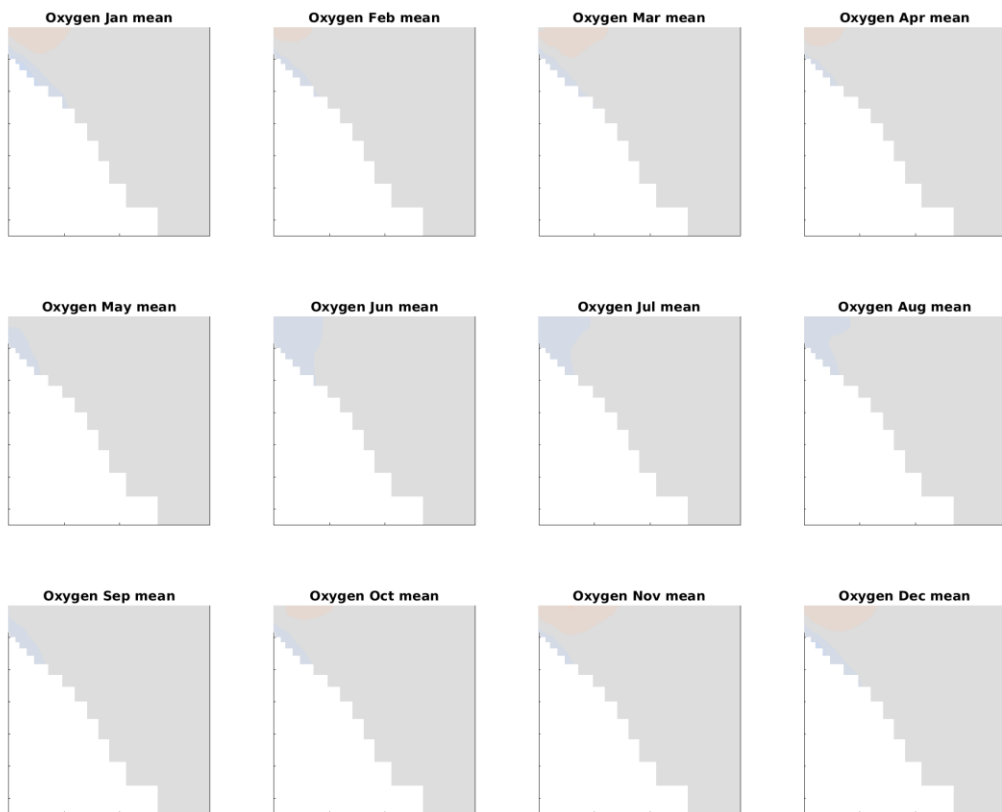
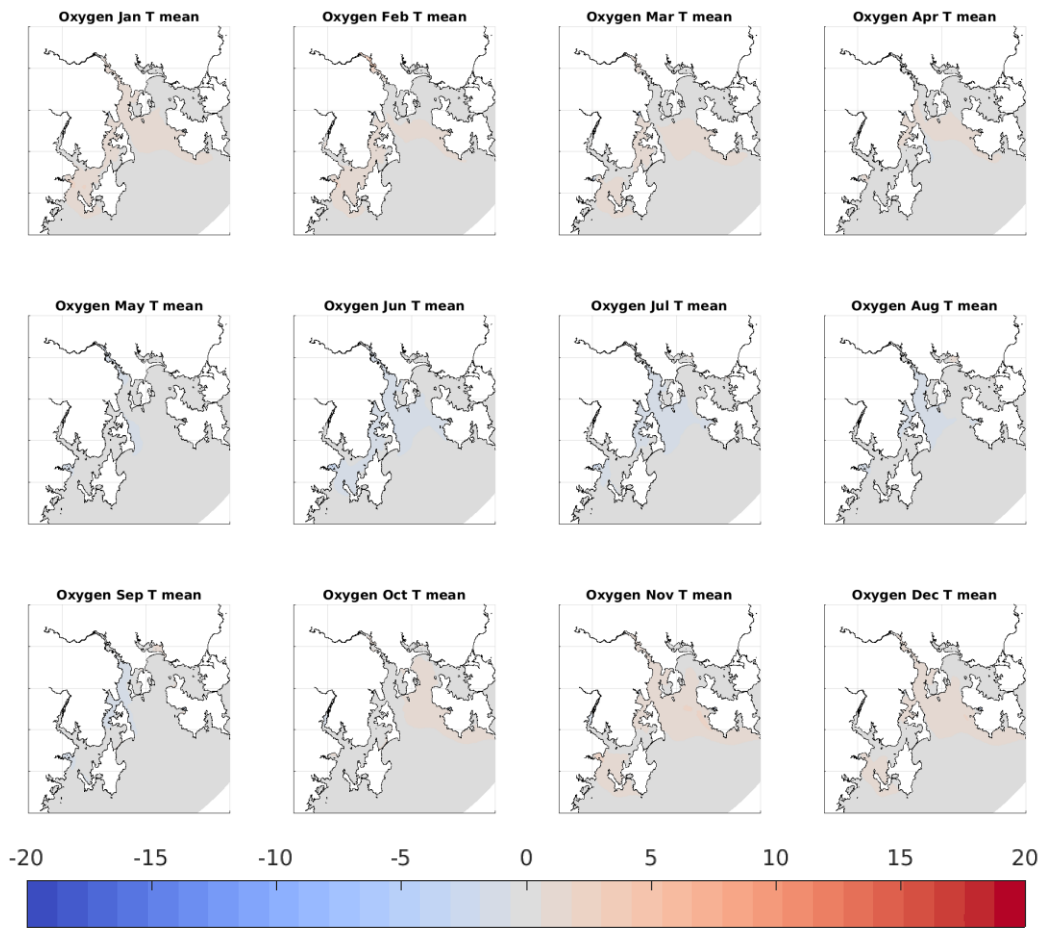
Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



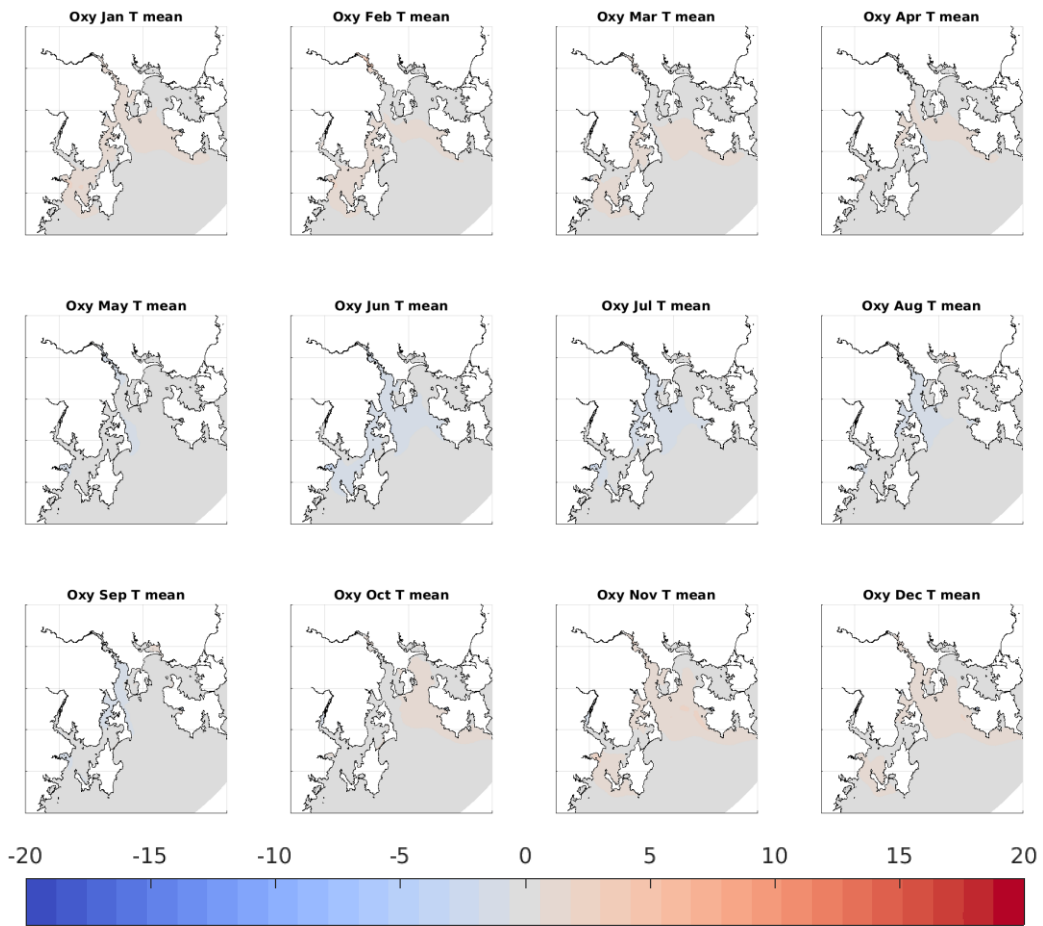
Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



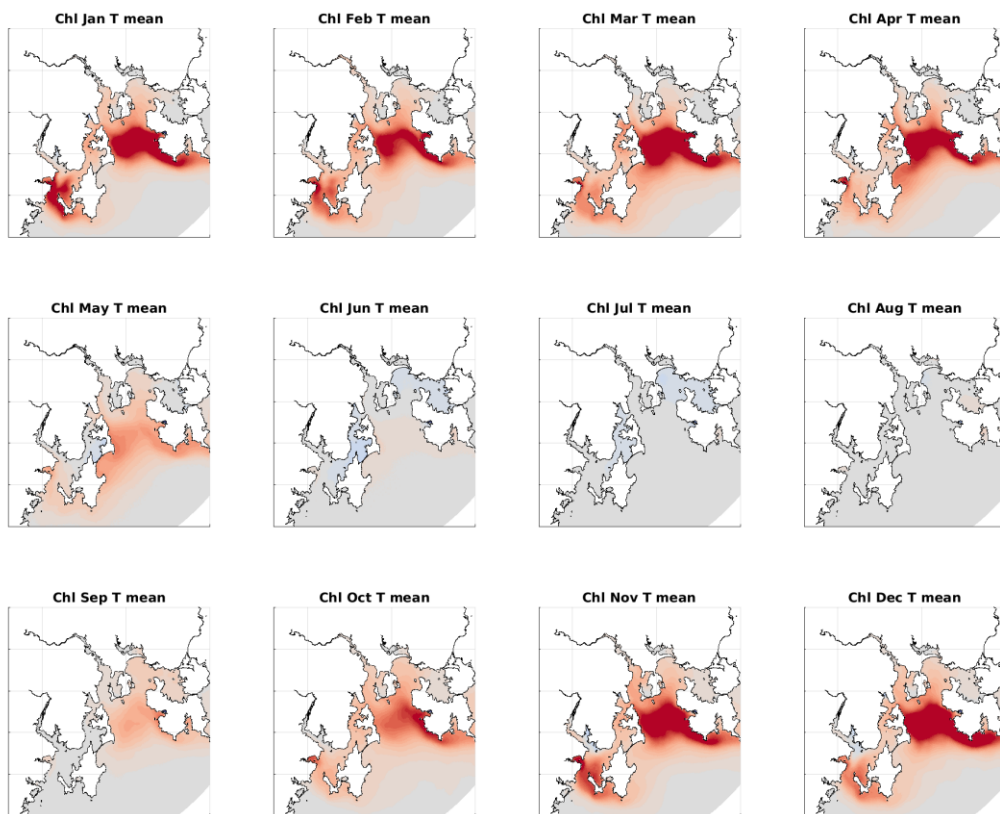
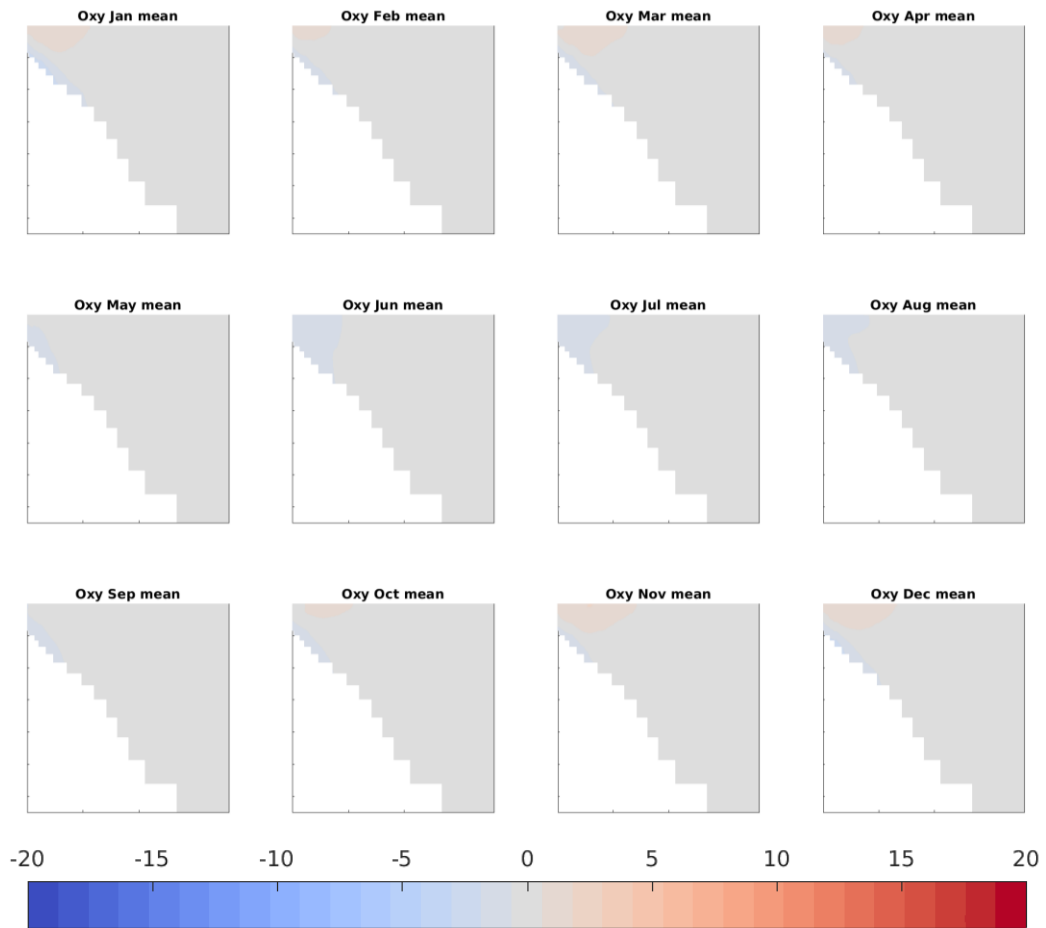
Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



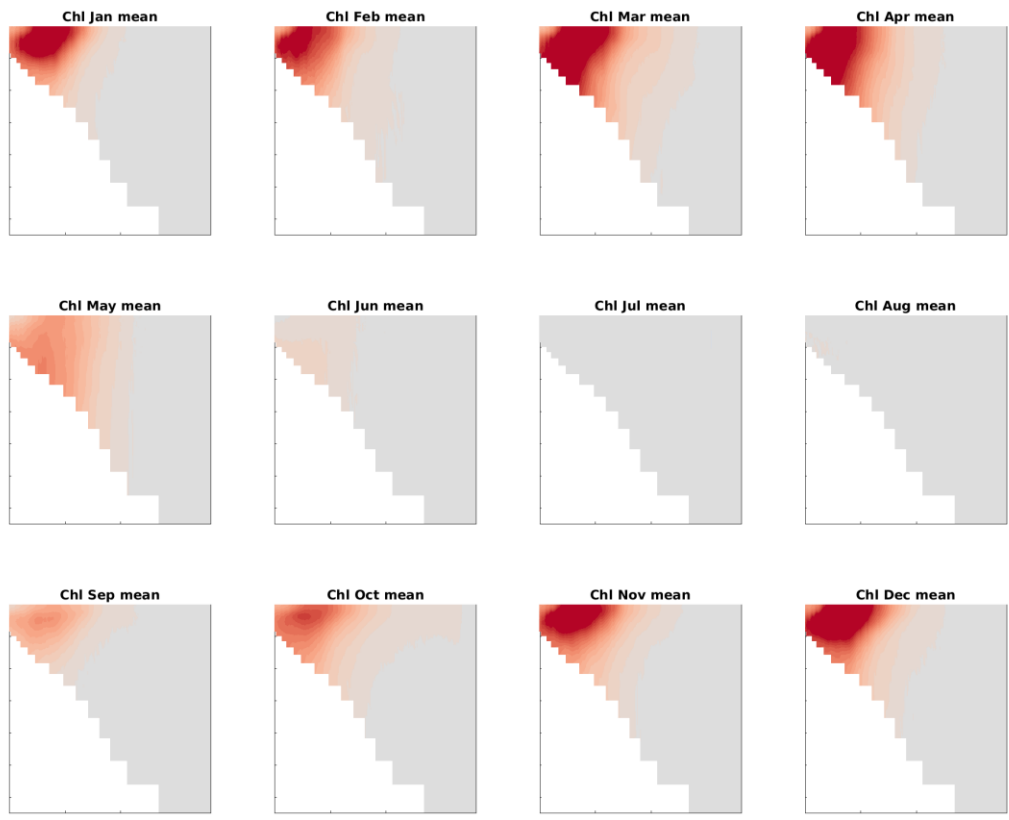
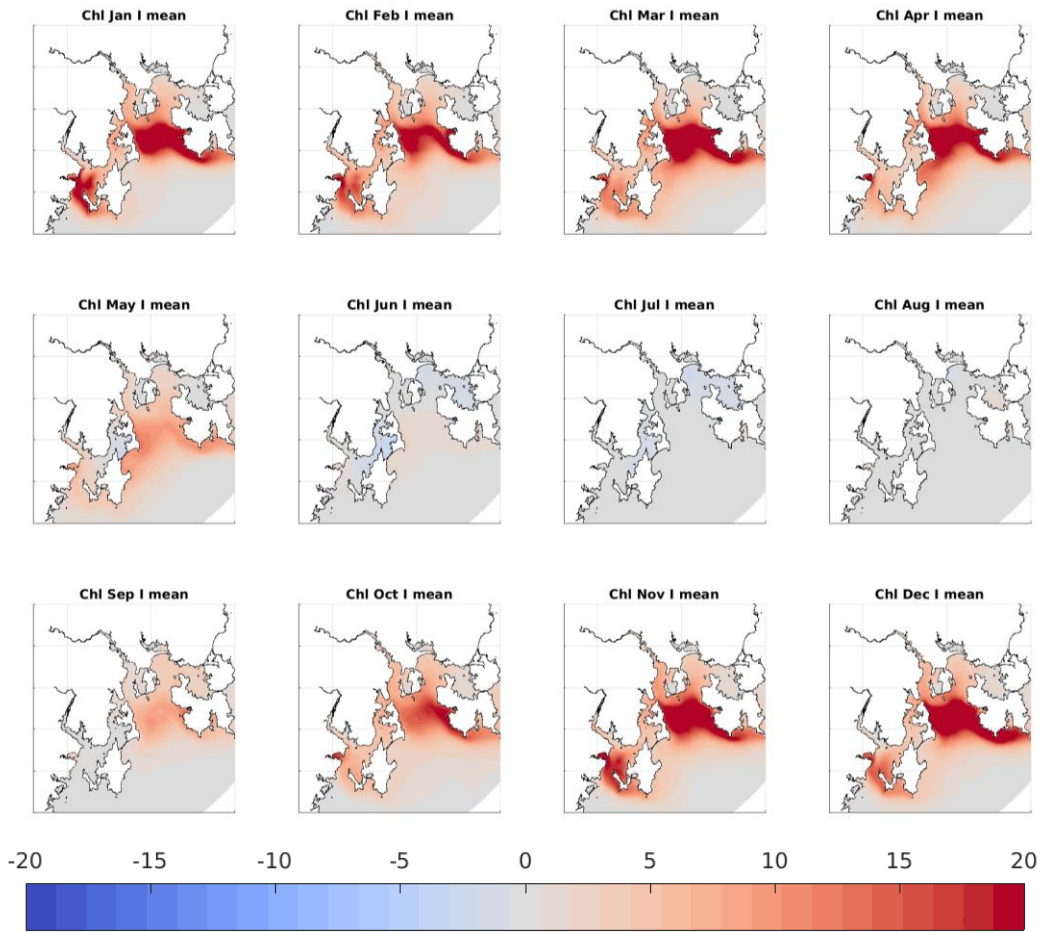
Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



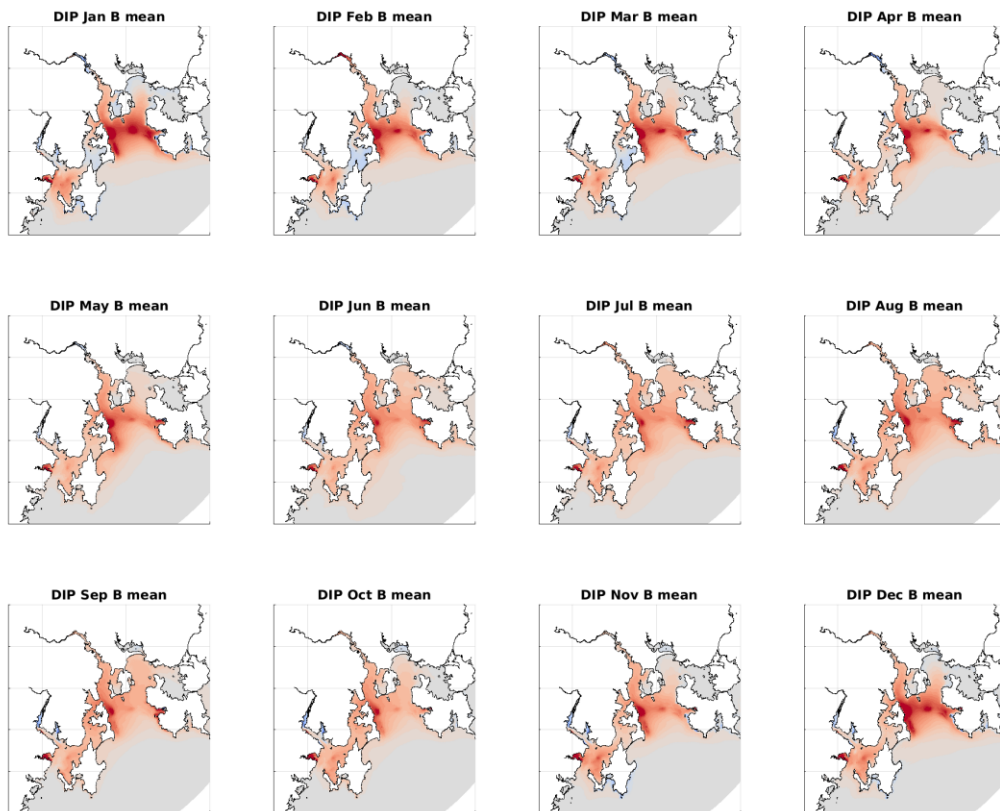
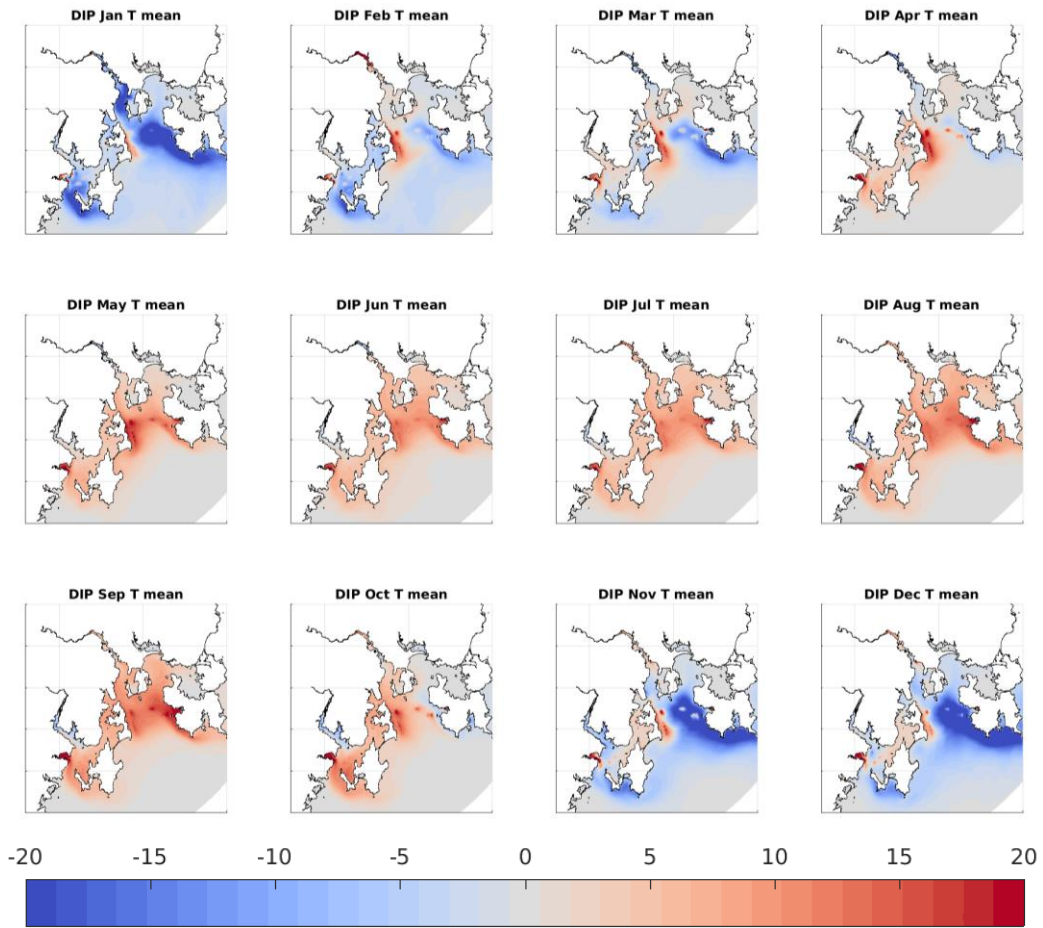
Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change

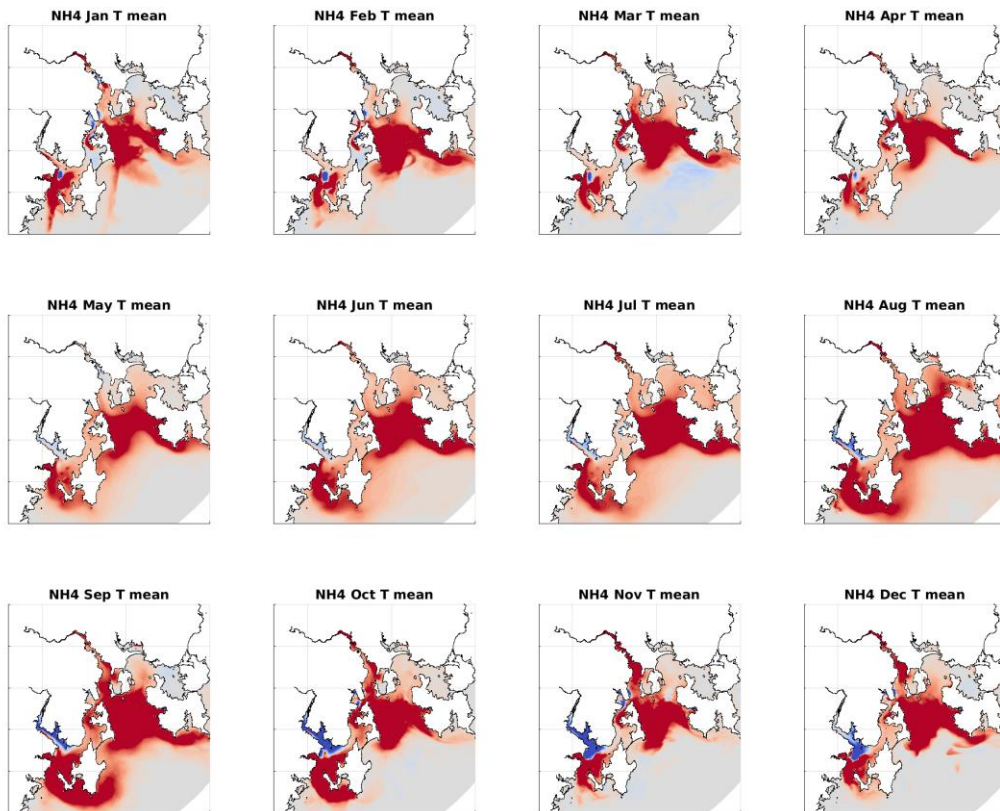
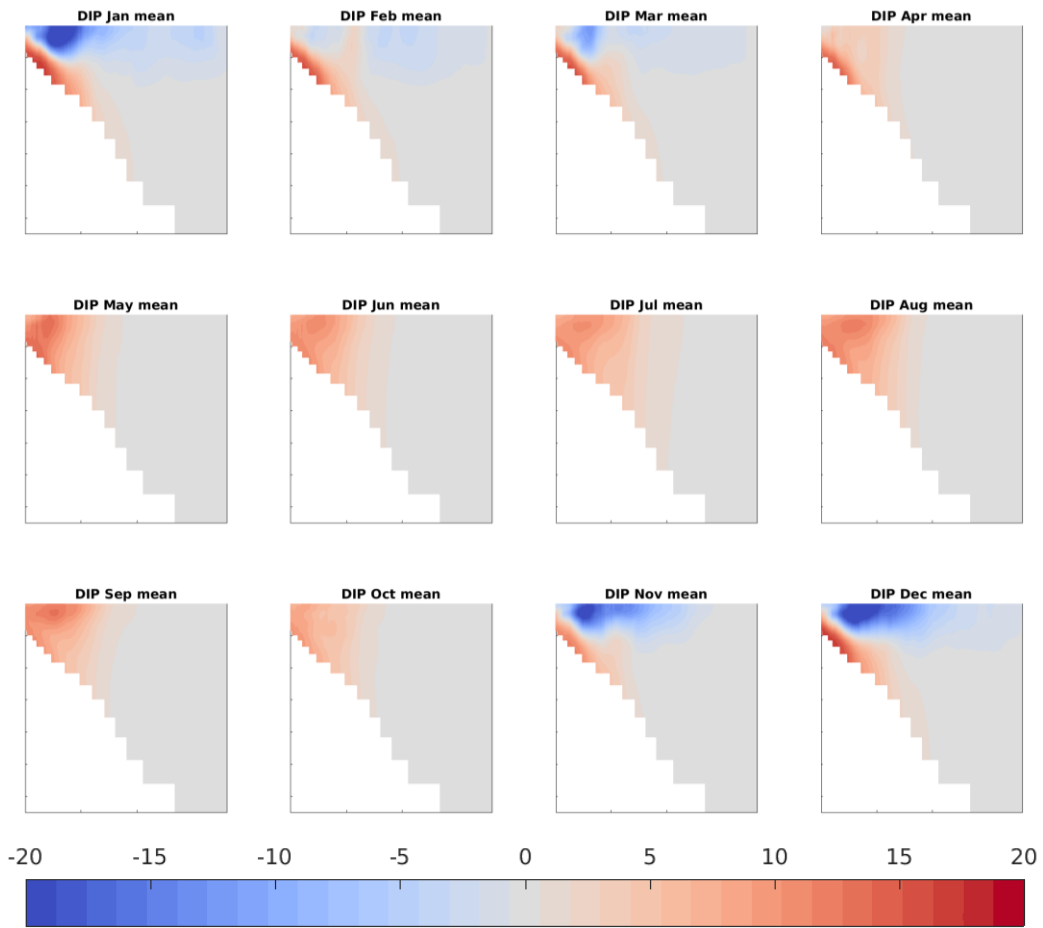


Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change

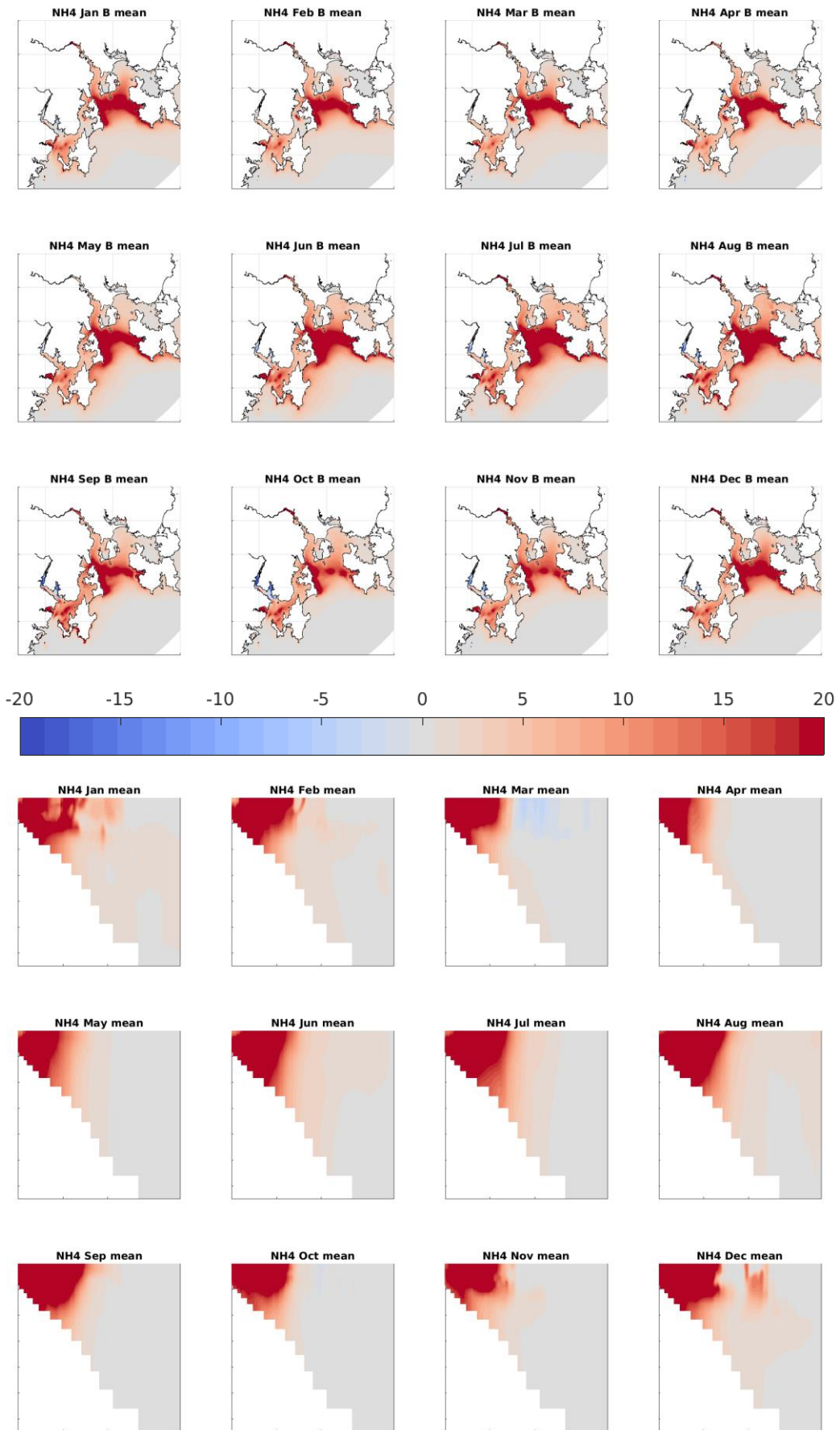


Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change

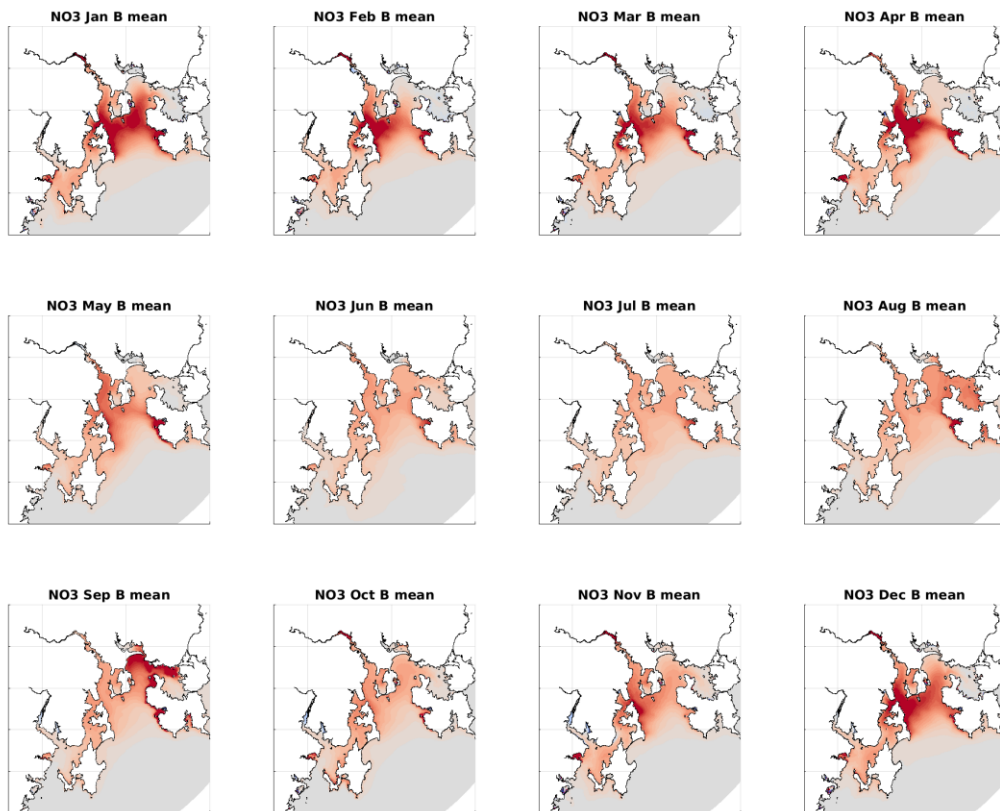
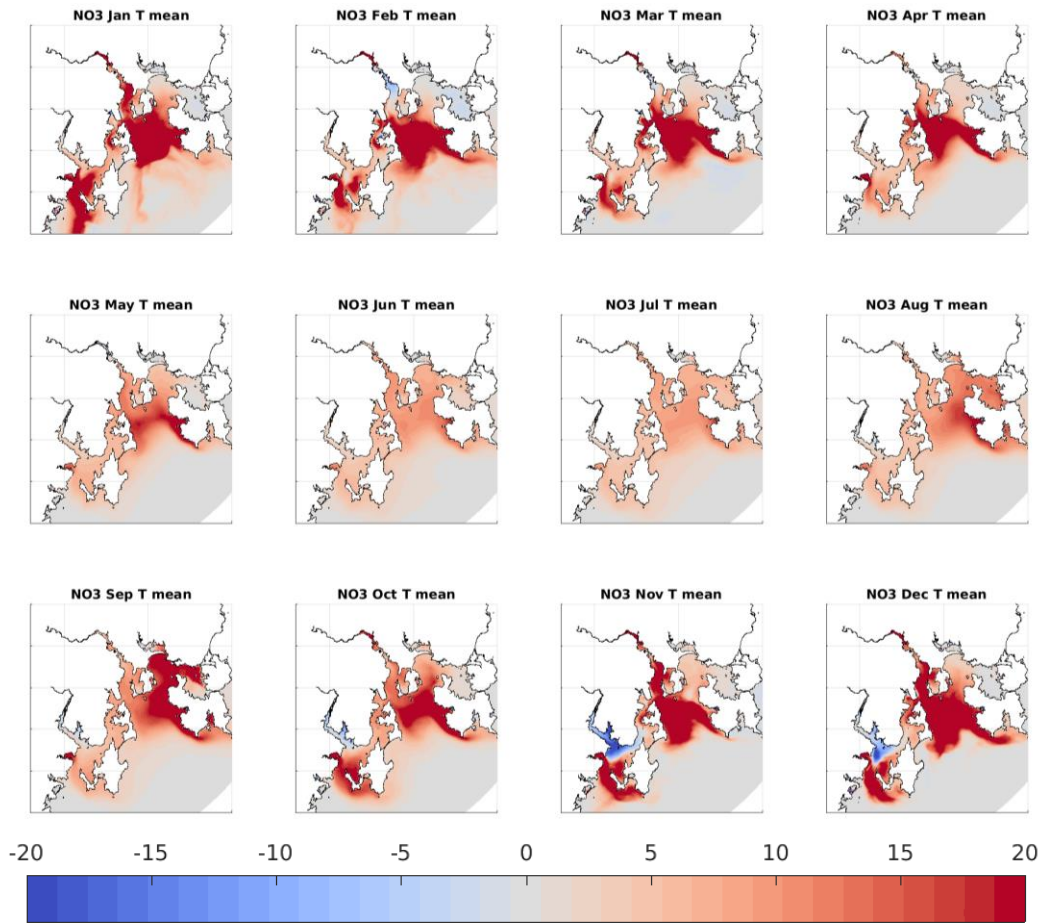




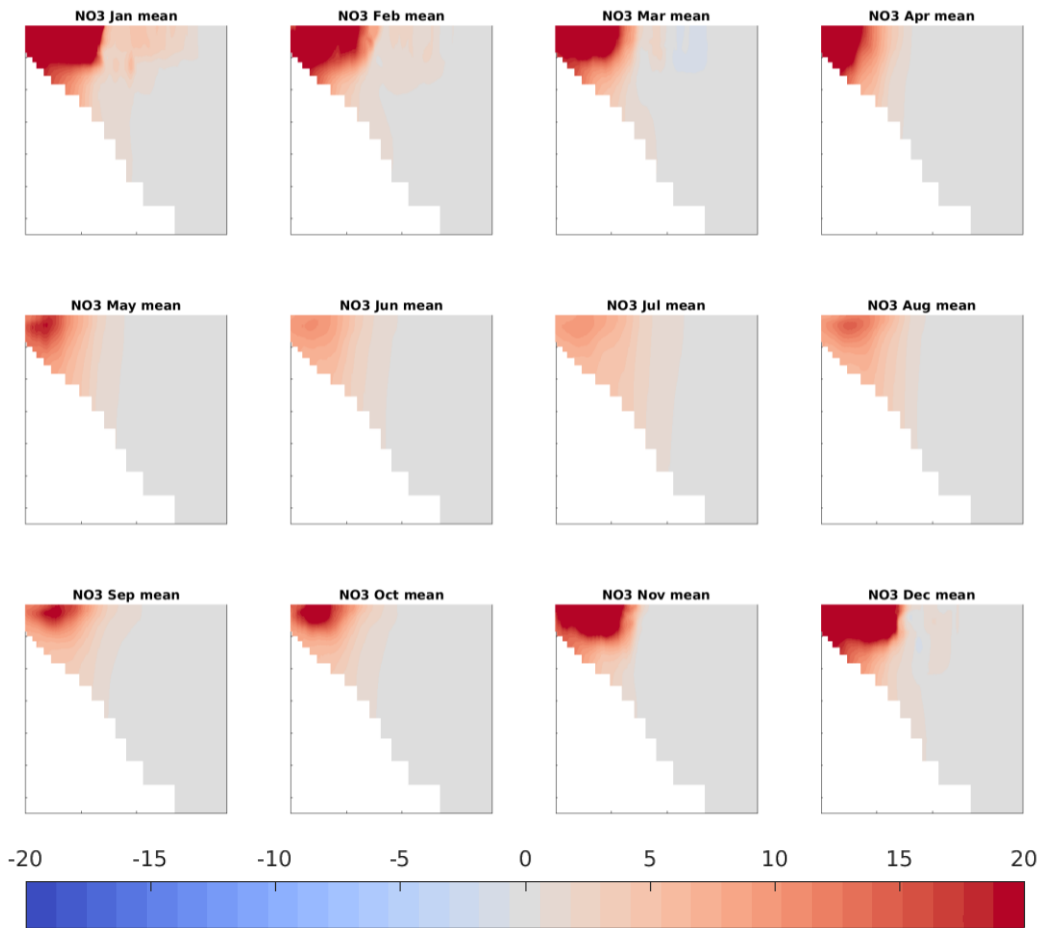
Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



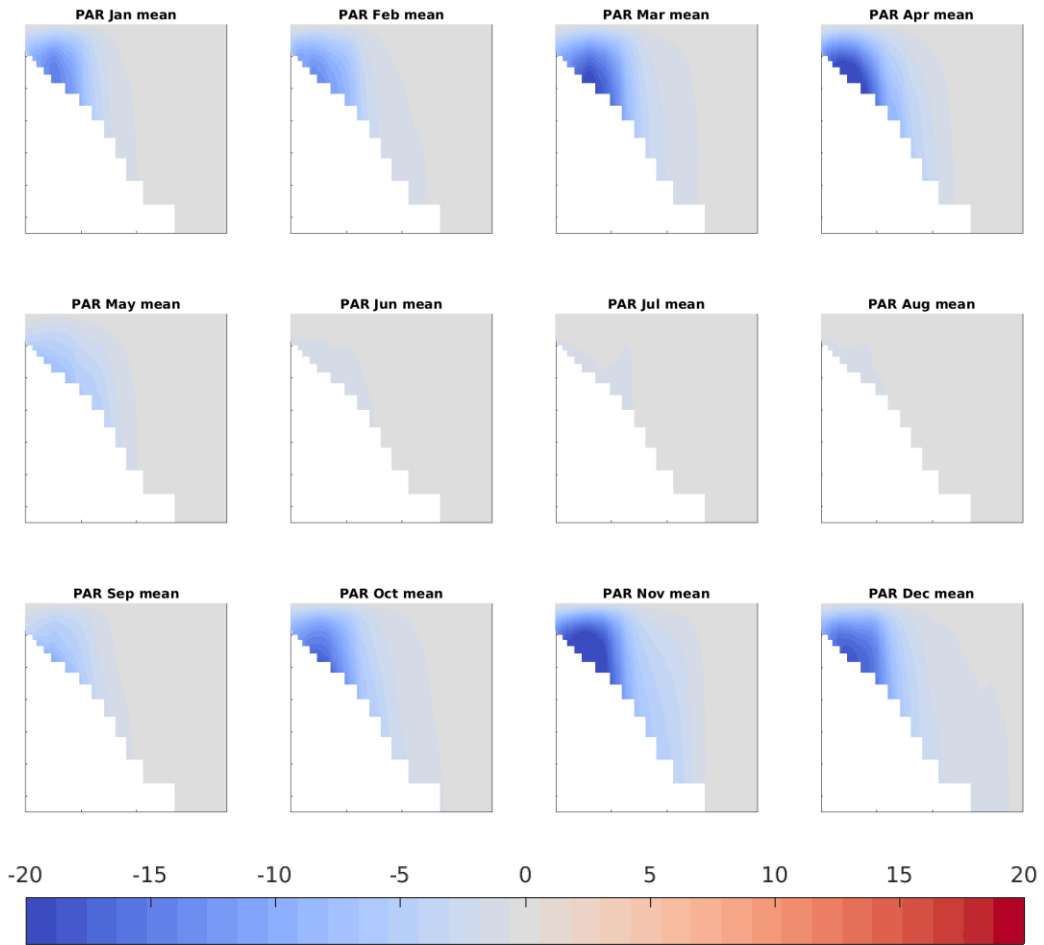
Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



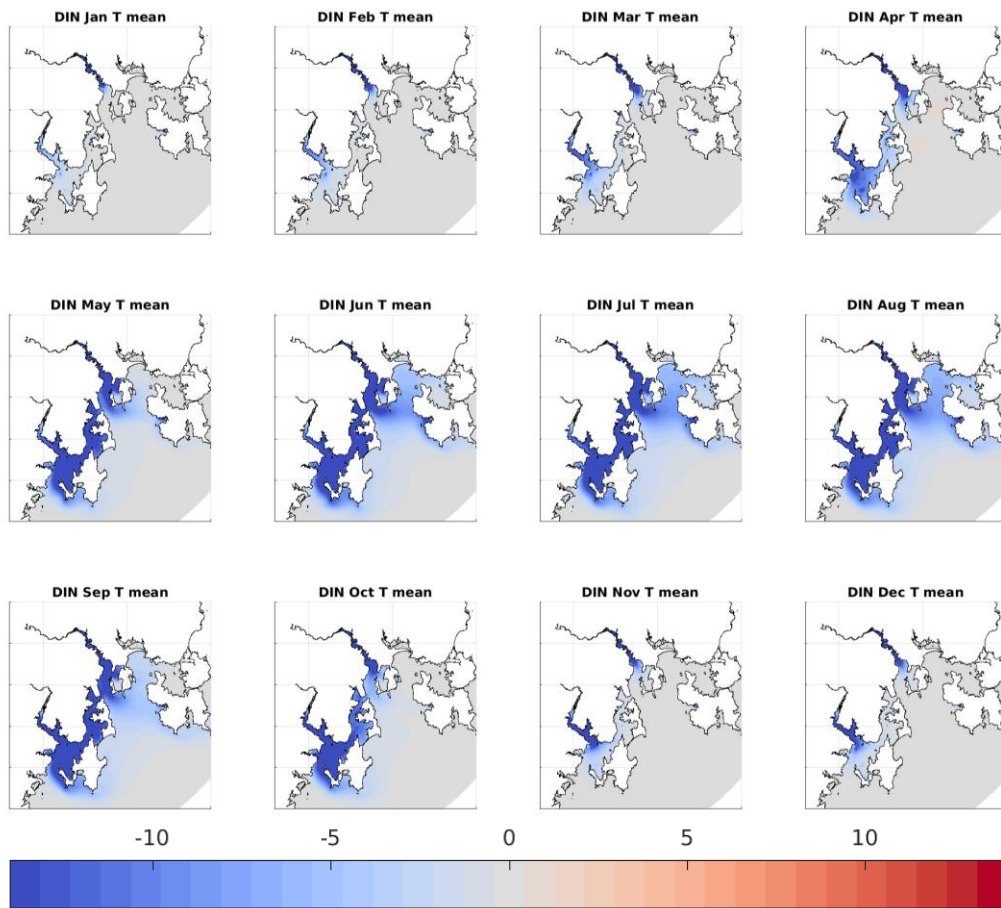
Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



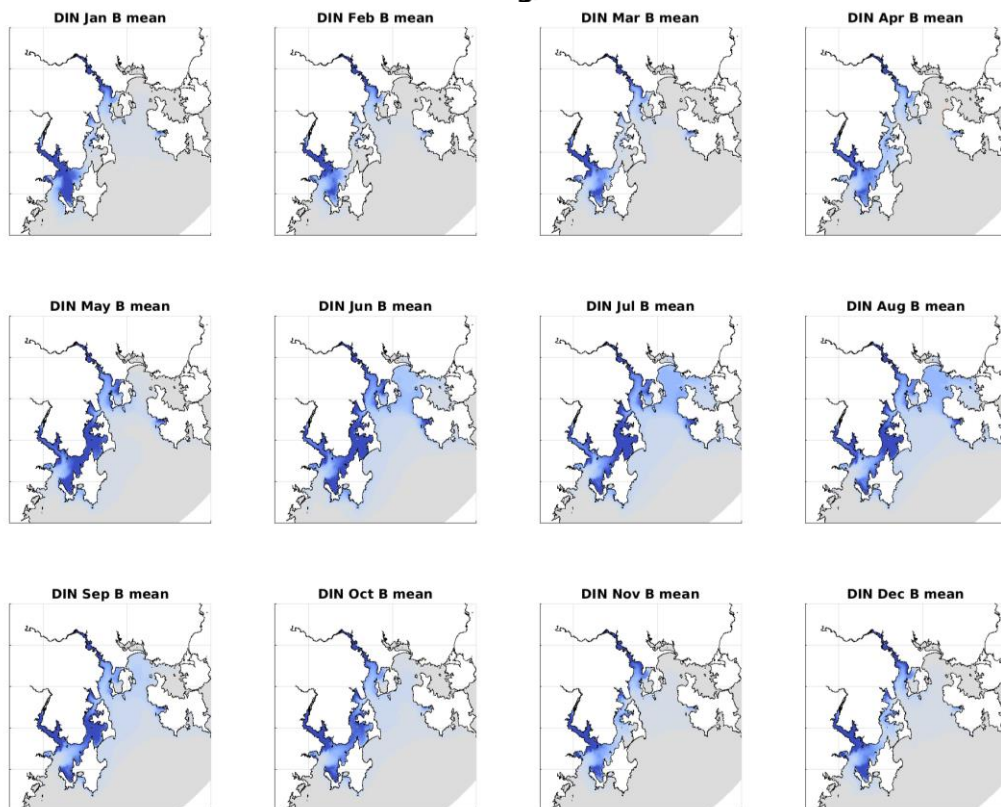
Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



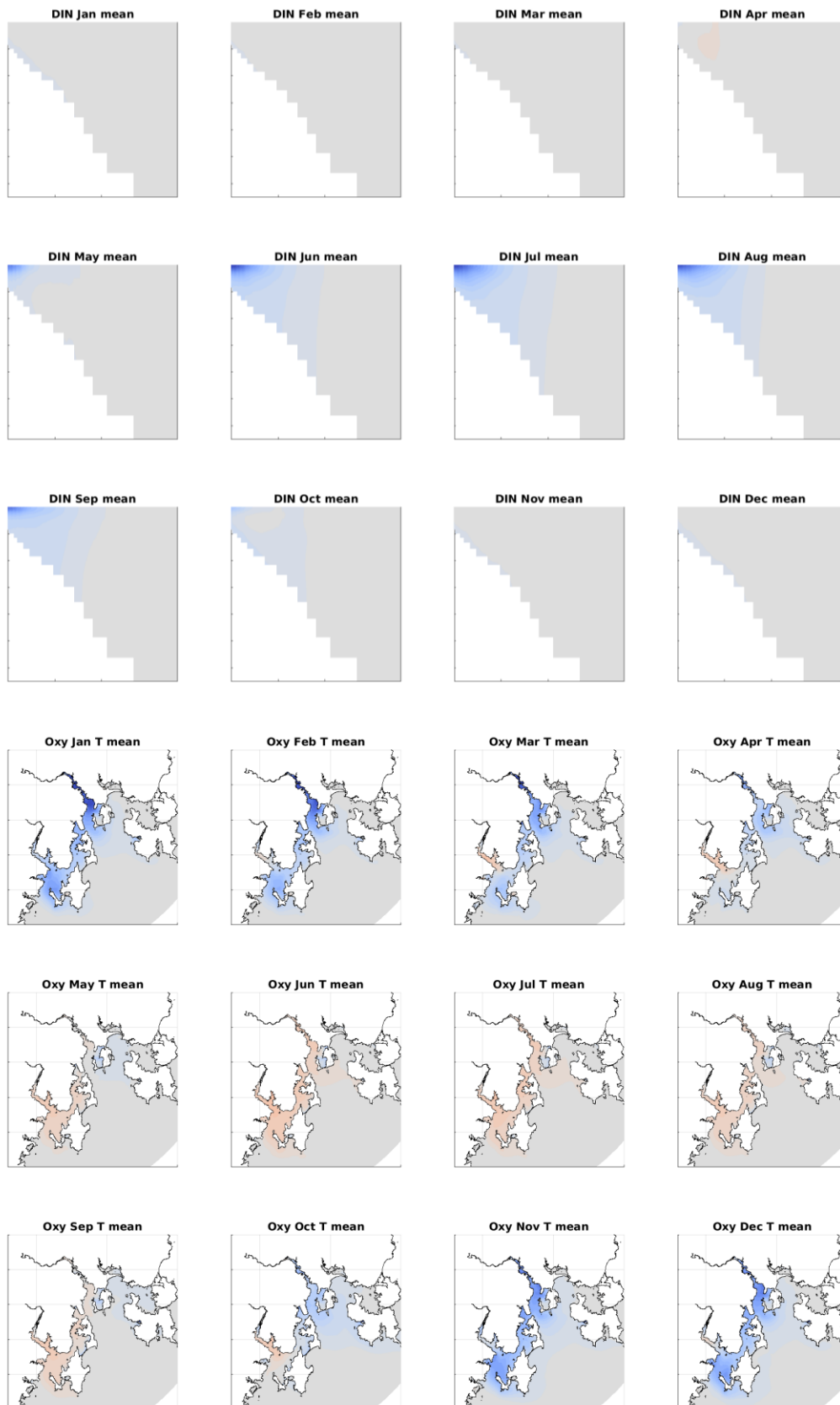
Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) % Change



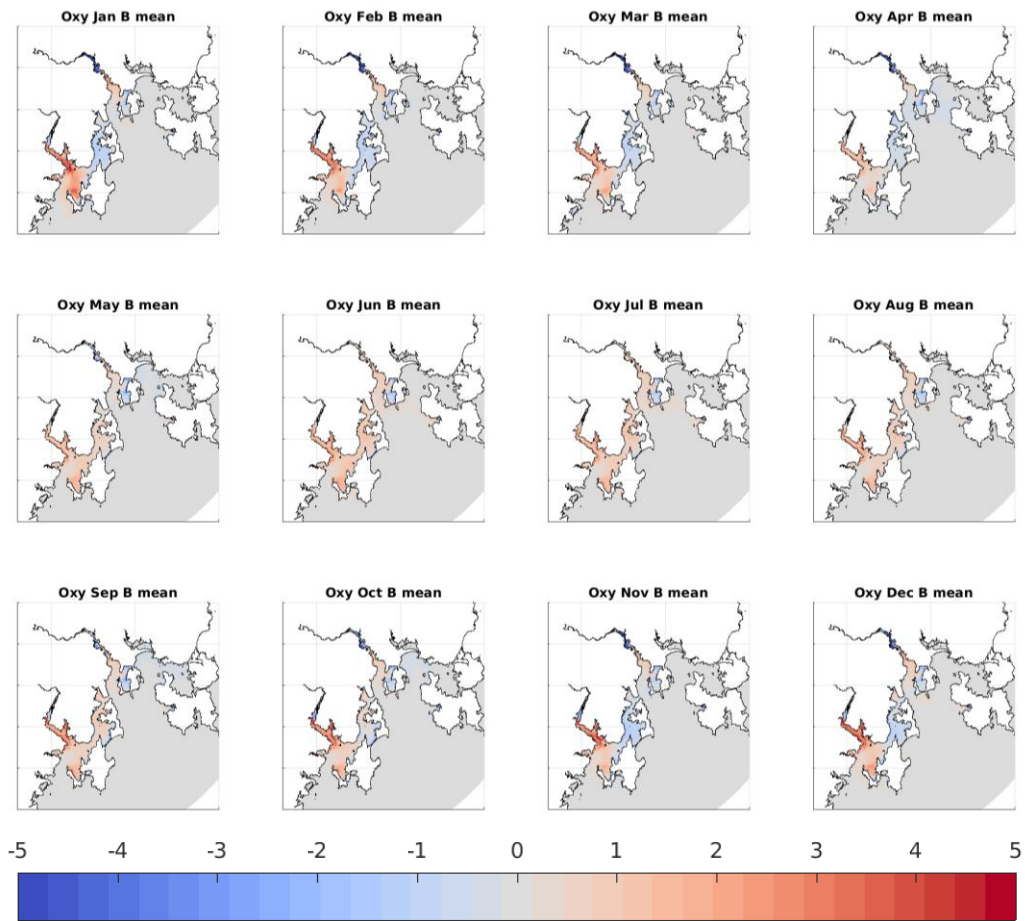
**DIN mg/m3**



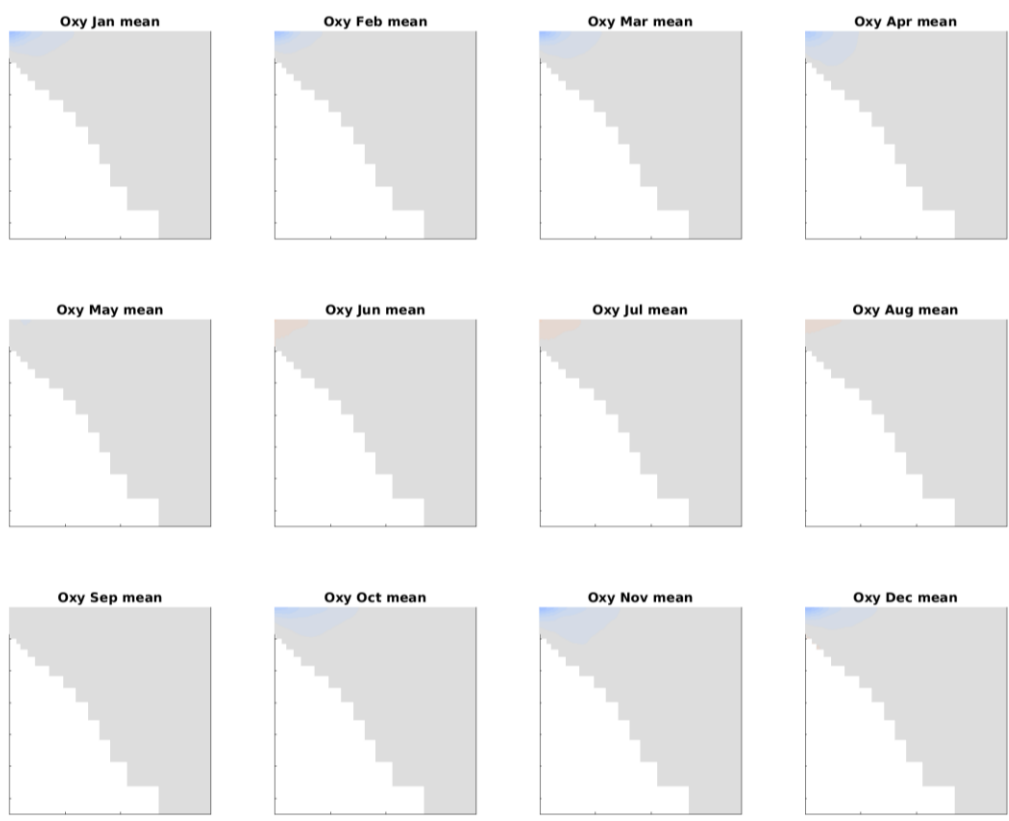
#2 Pre-Development scenario (no anthropogenic loads) - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



#2 Pre-Development scenario (no anthropogenic loads) - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change

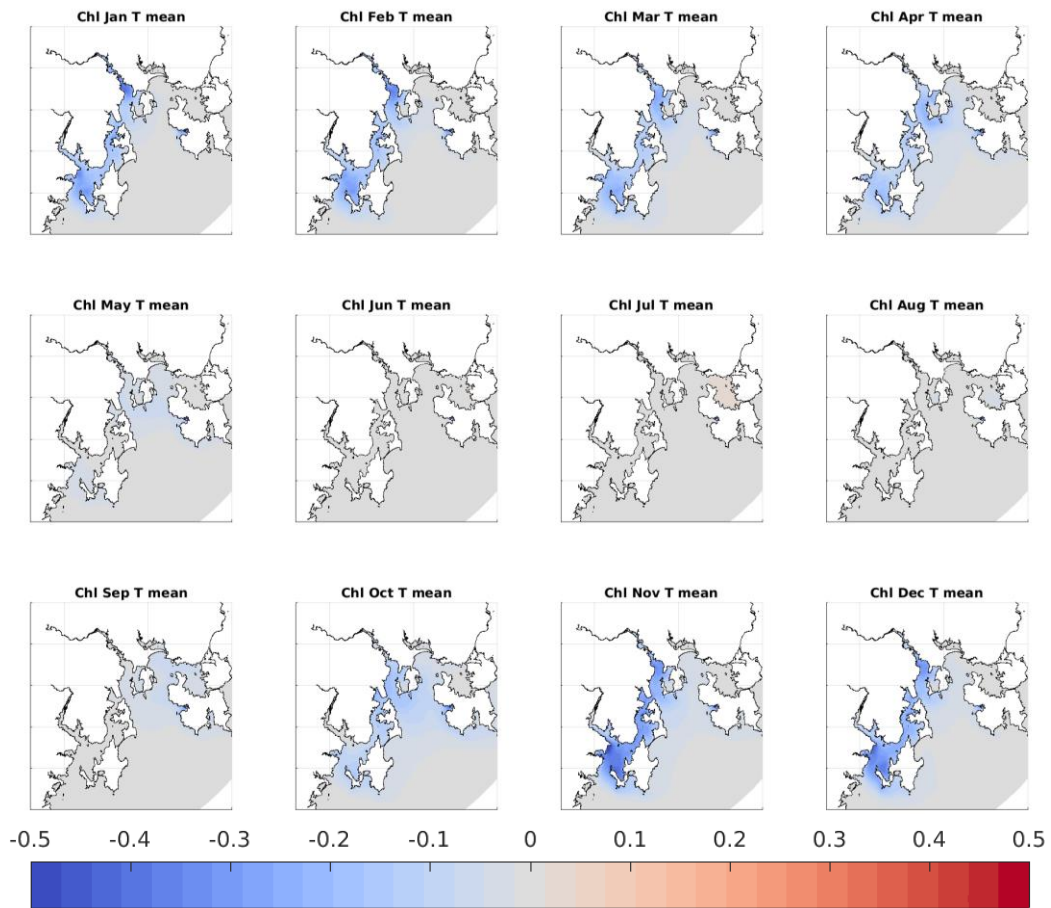


Oxygen % Saturation

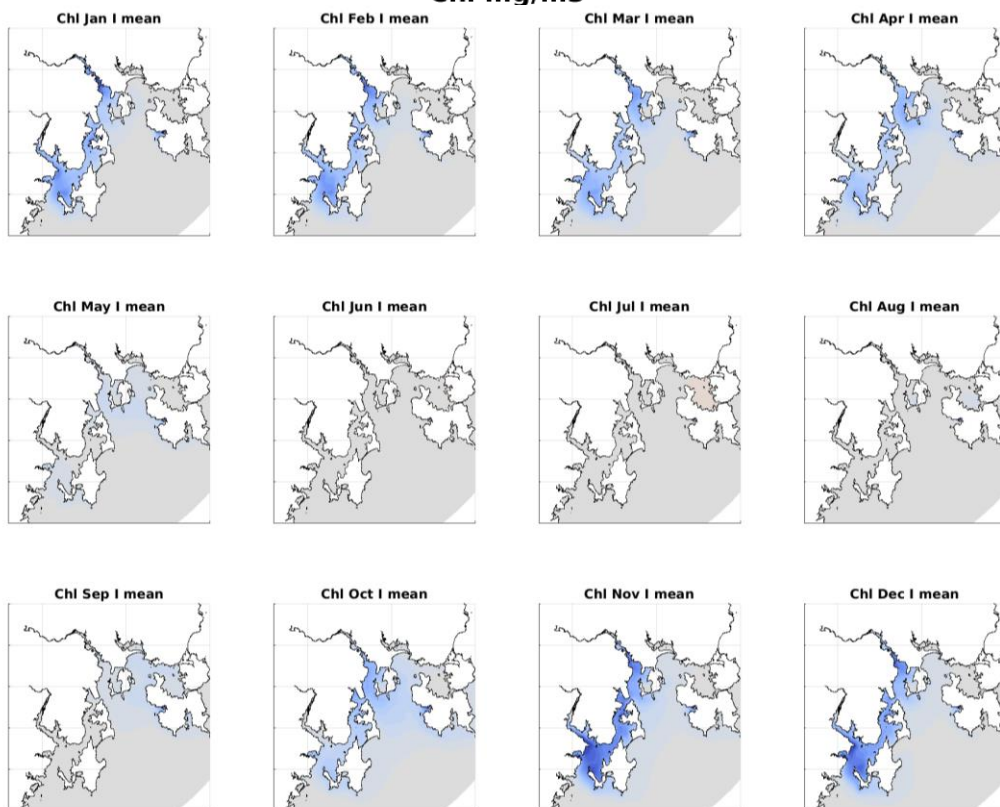


#2 Pre-Development scenario (no anthropogenic loads) - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change





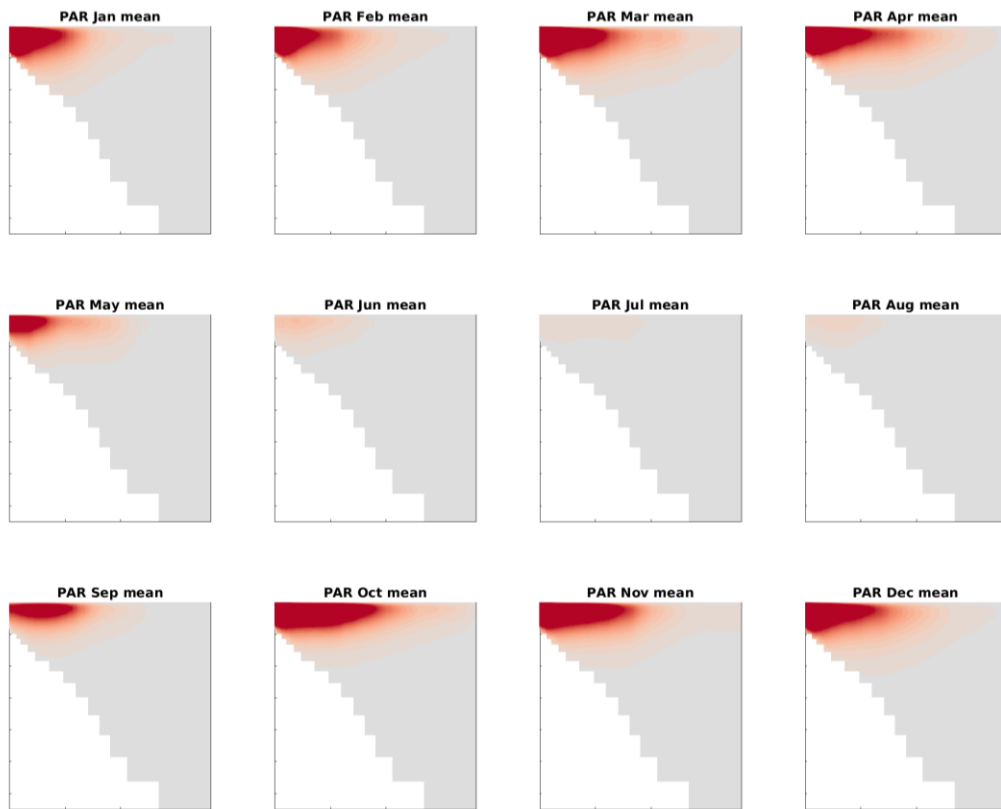
**Chl mg/m3**



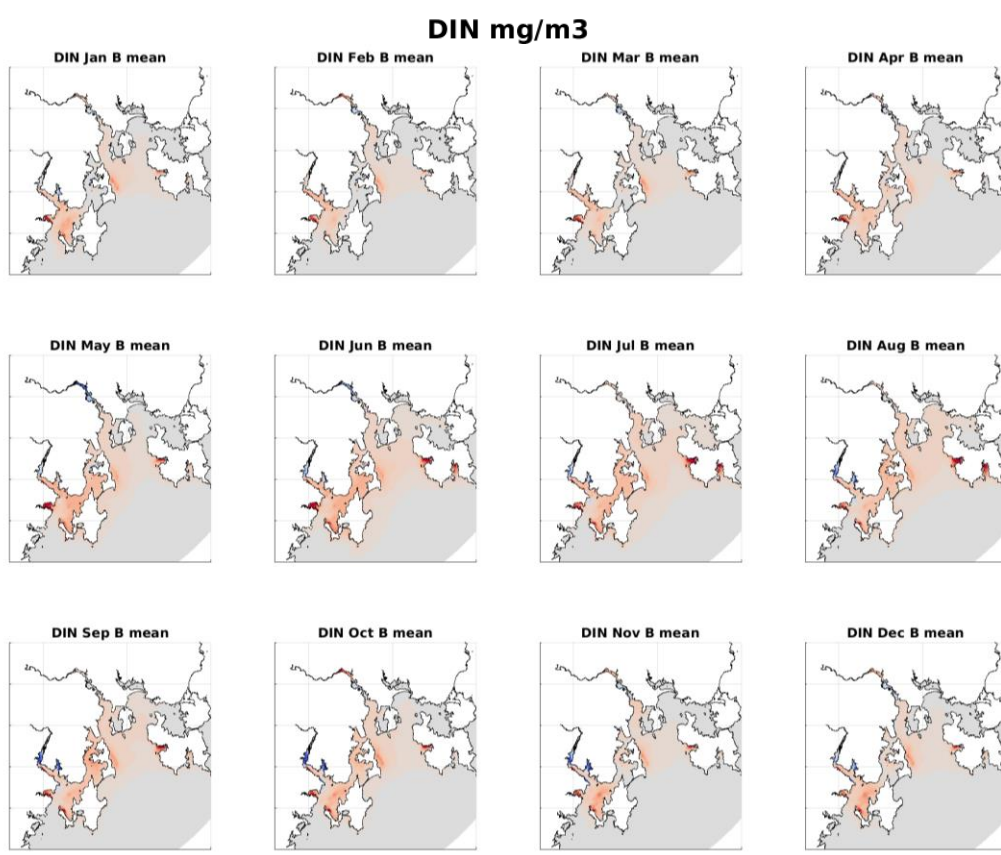
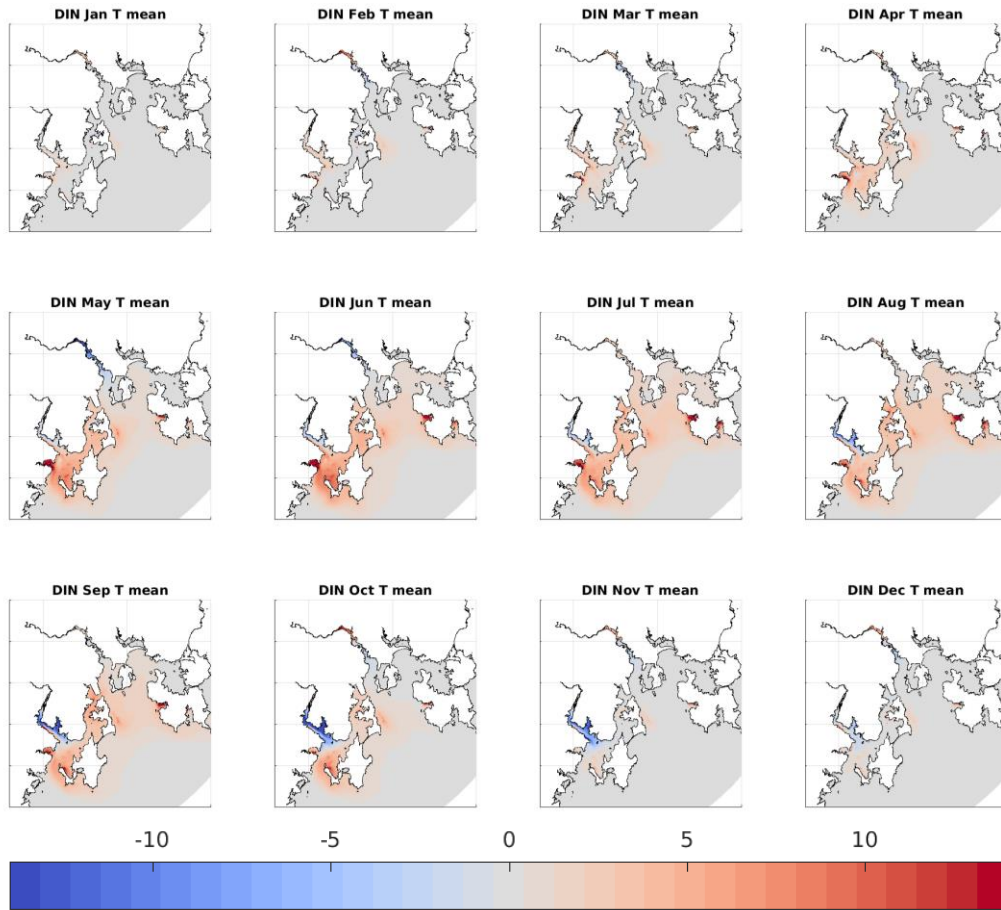
#2 Pre-Development scenario (no anthropogenic loads) - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



#2 Pre-Development scenario (no anthropogenic loads) - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



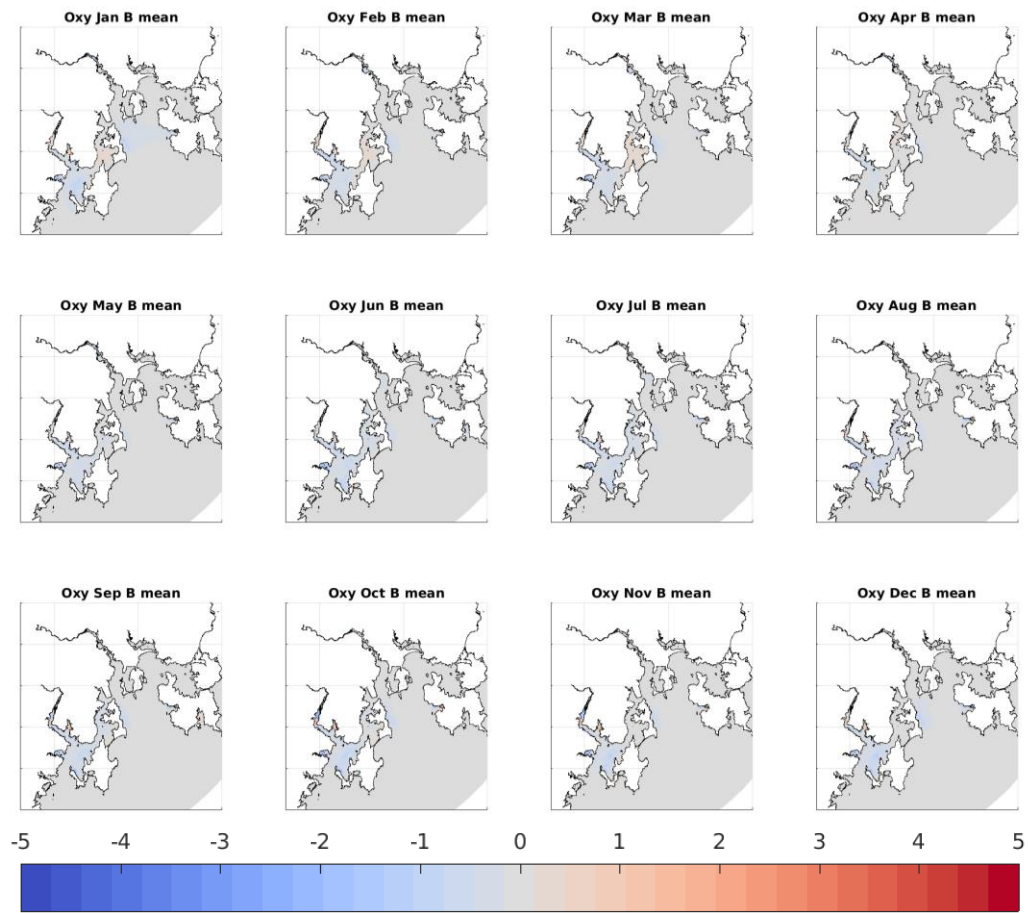
#2 Pre-Development scenario (no anthropogenic loads) - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



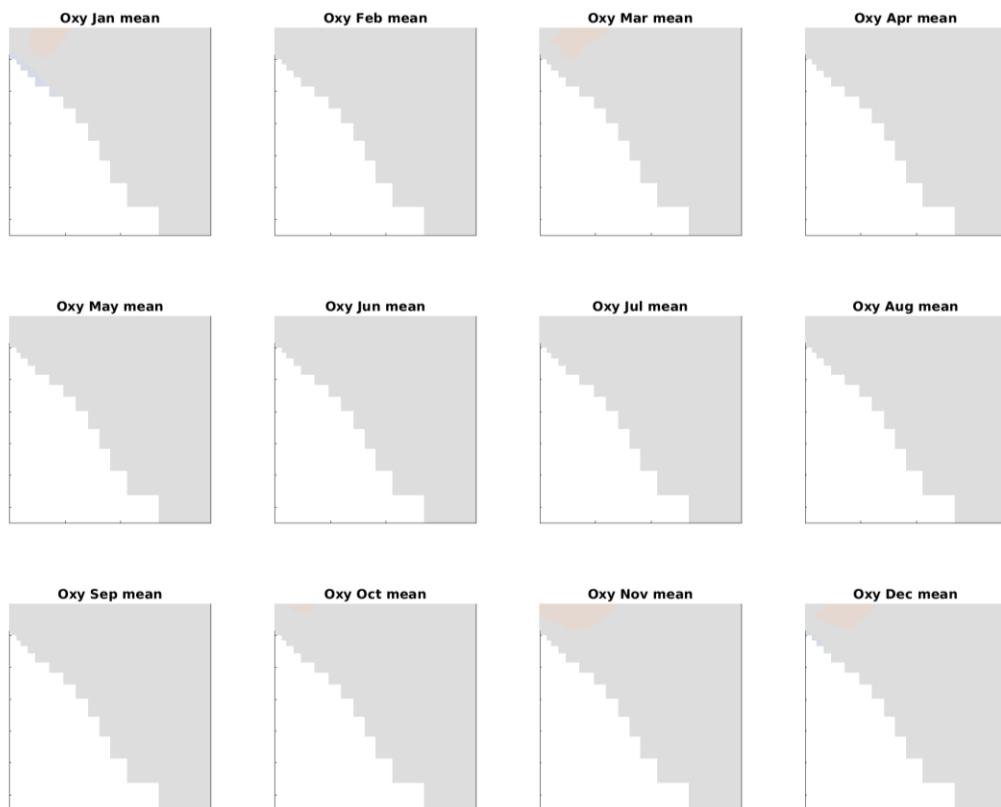
#1 Hindcast simulation - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



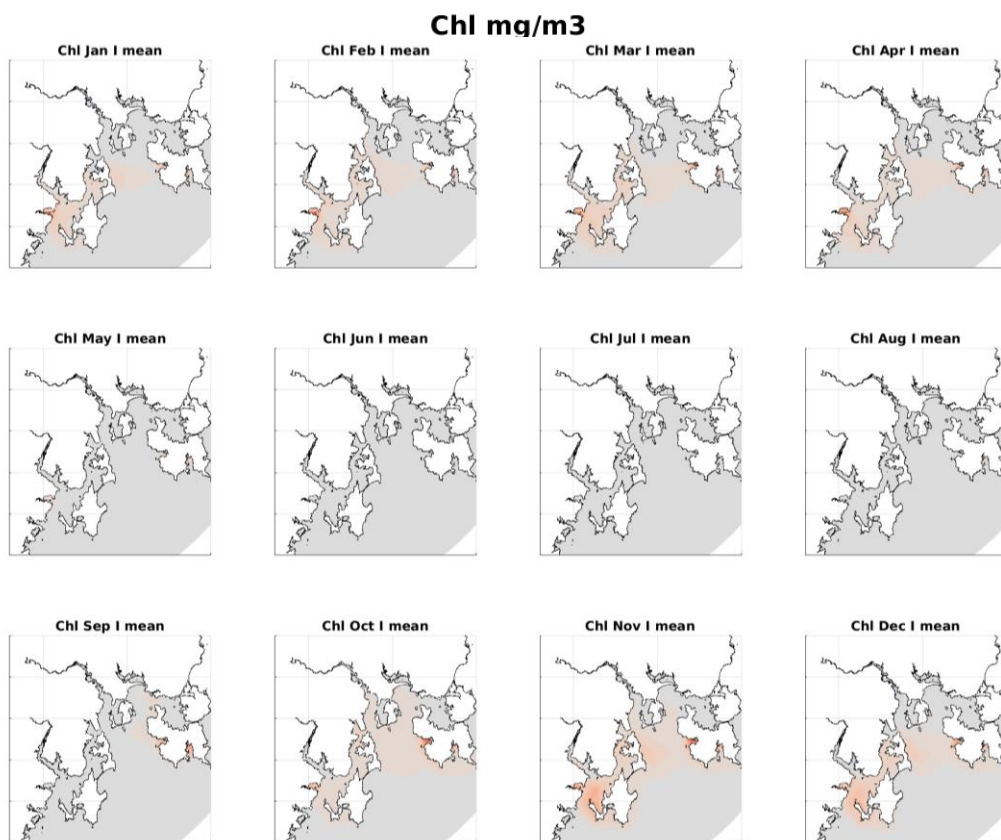
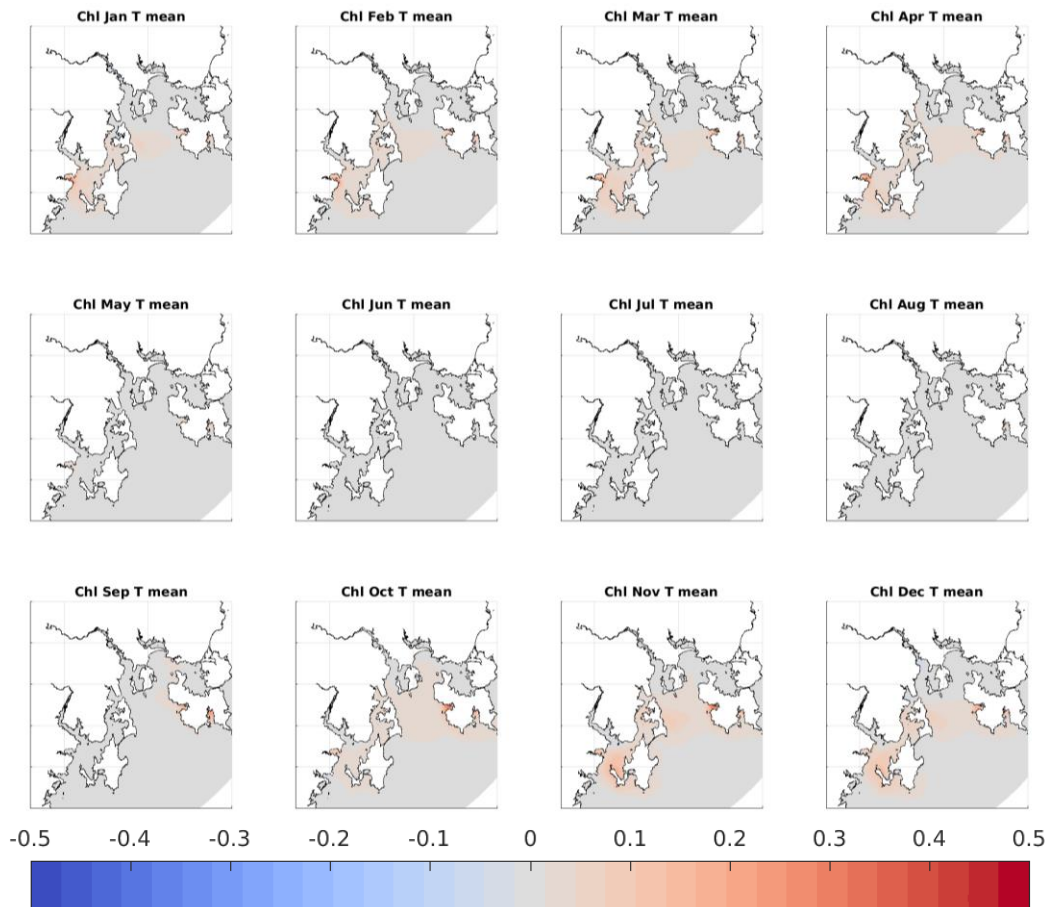
#1 Hindcast simulation - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



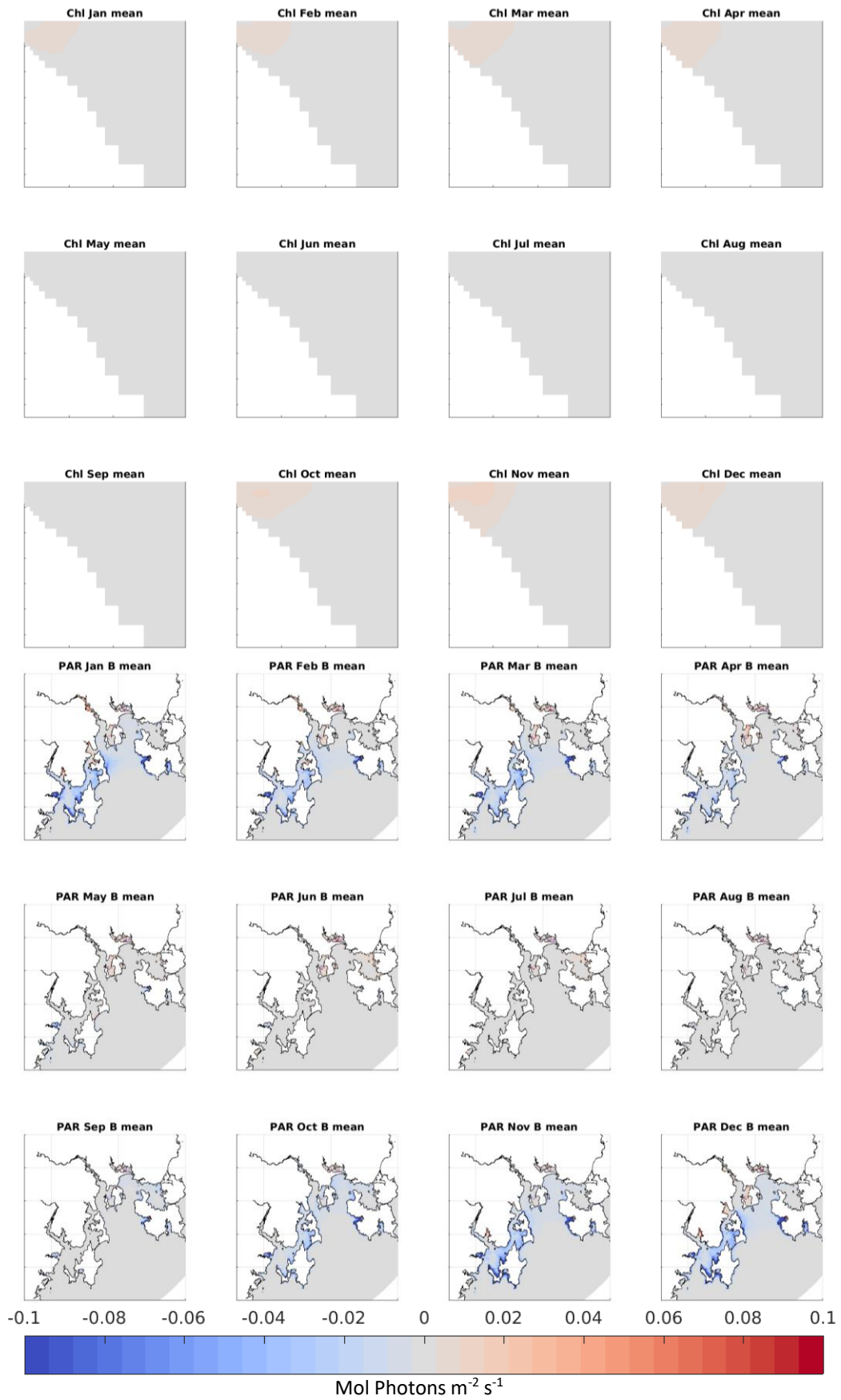
Oxygen % Saturation



#1 Hindcast simulation - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change

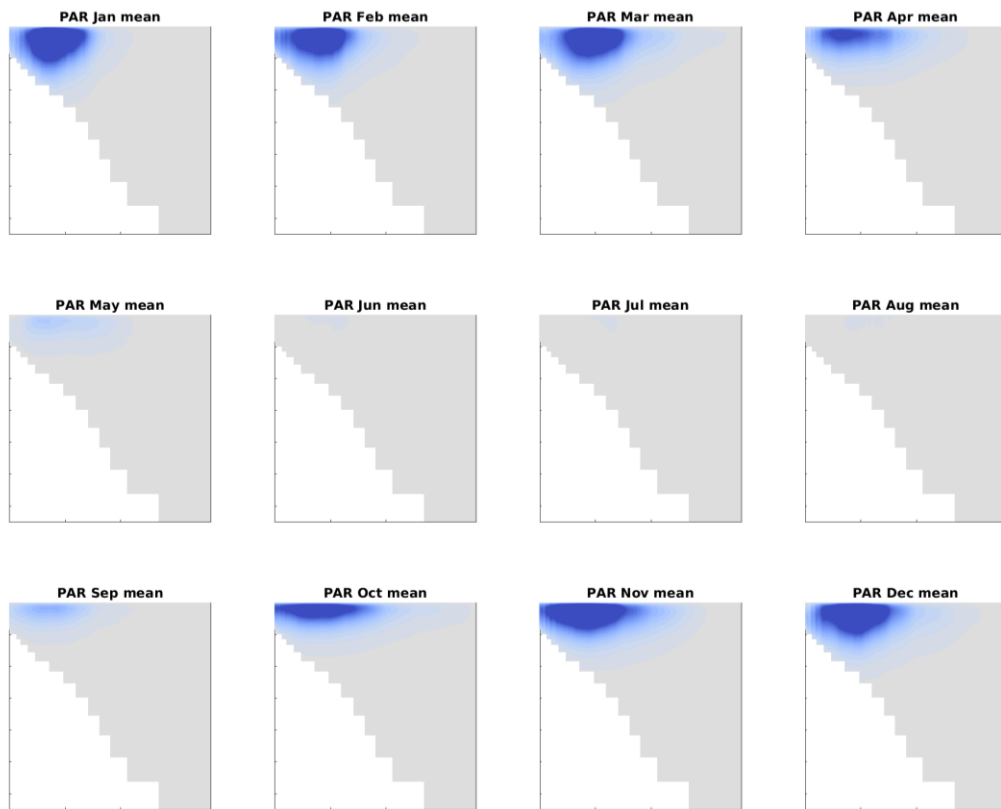


#1 Hindcast simulation - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change

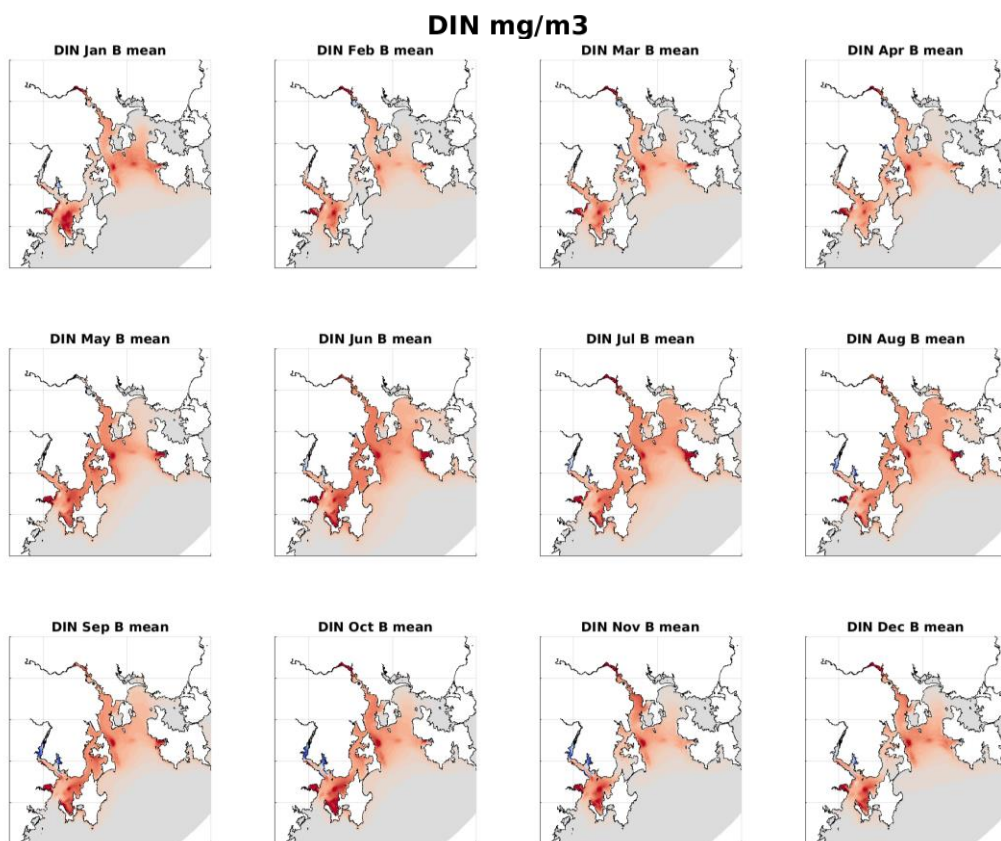
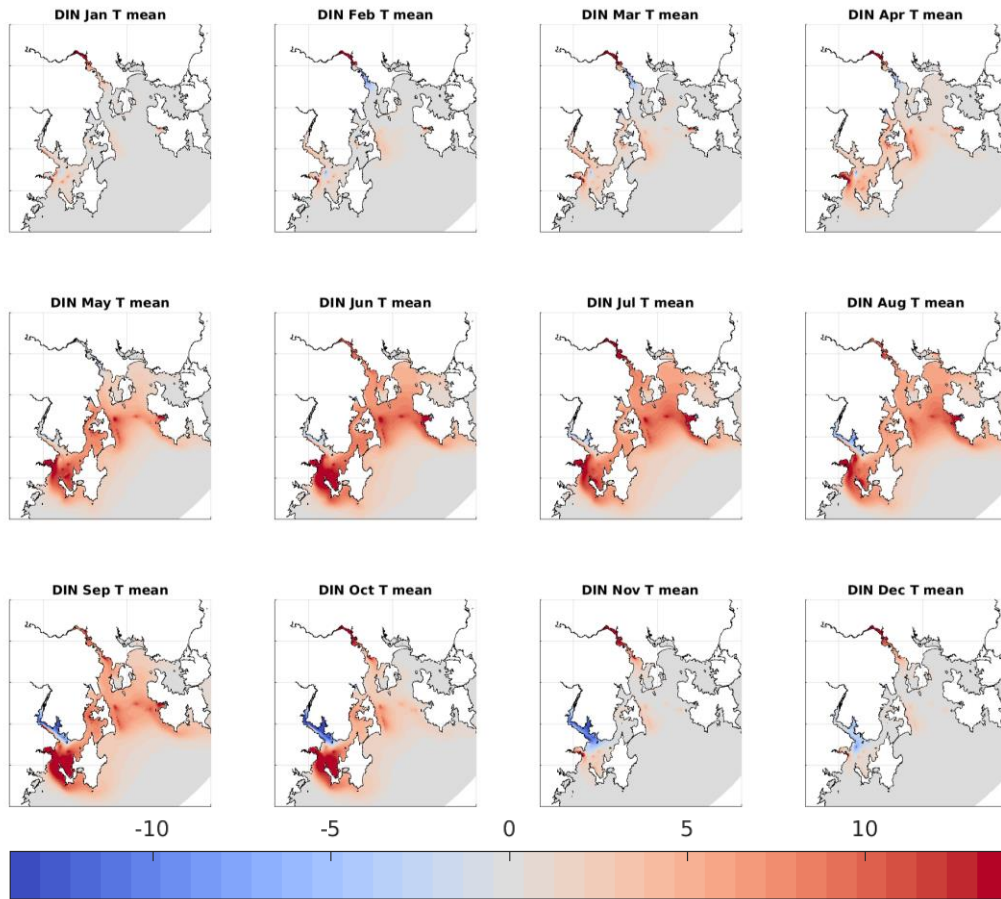


#1 Hindcast simulation - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change

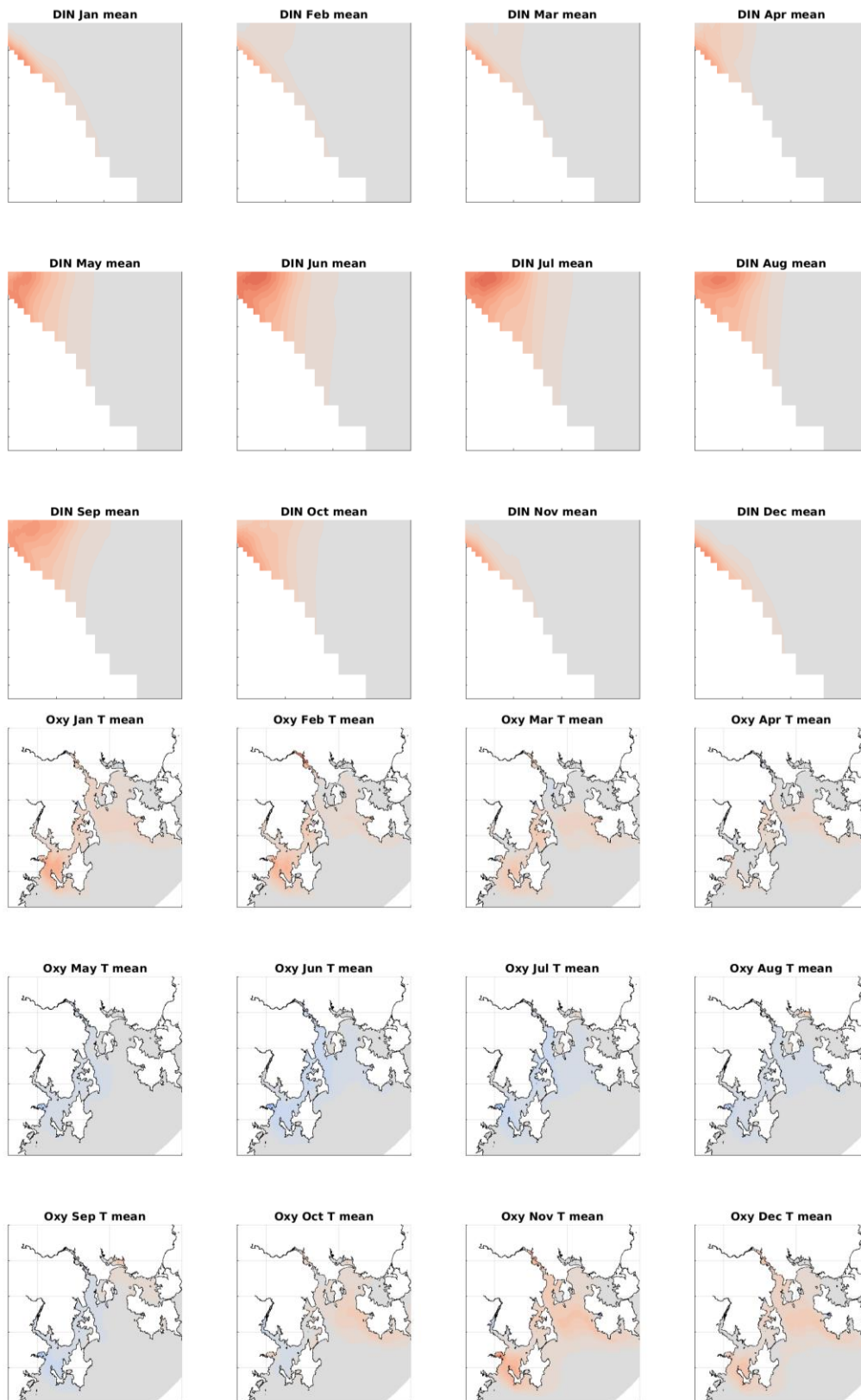




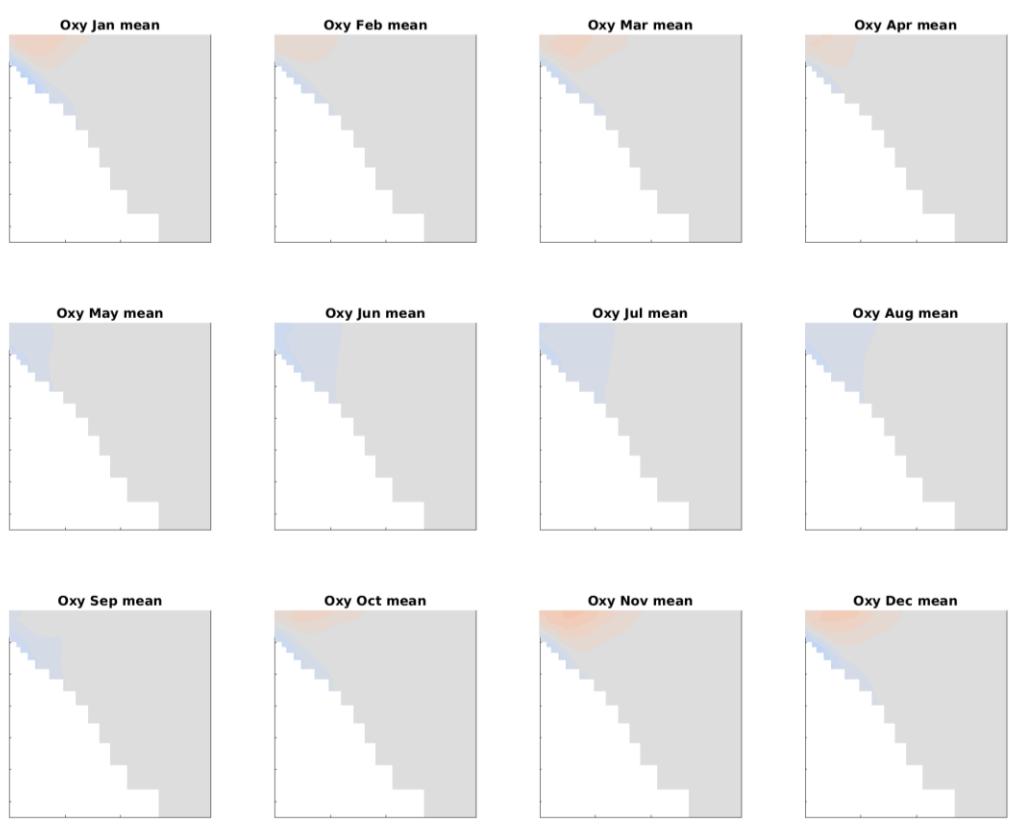
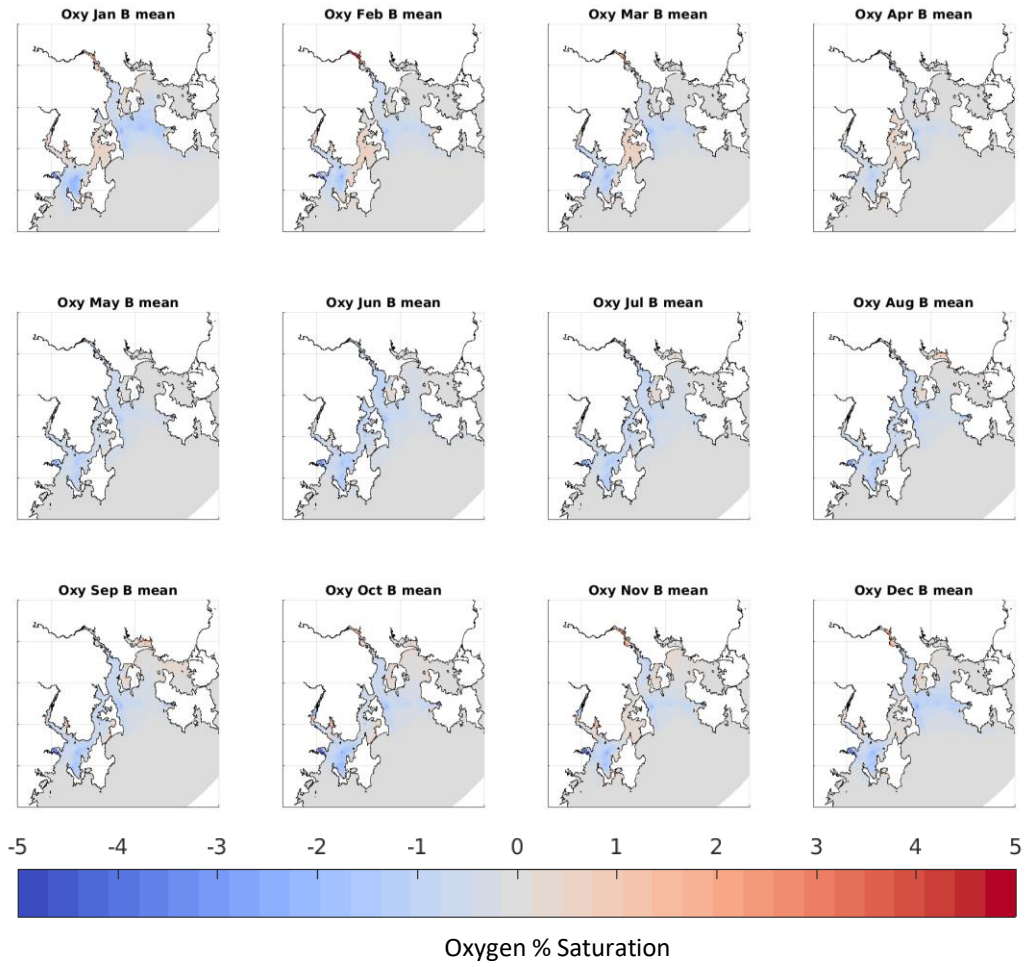
#1 Hindcast simulation - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



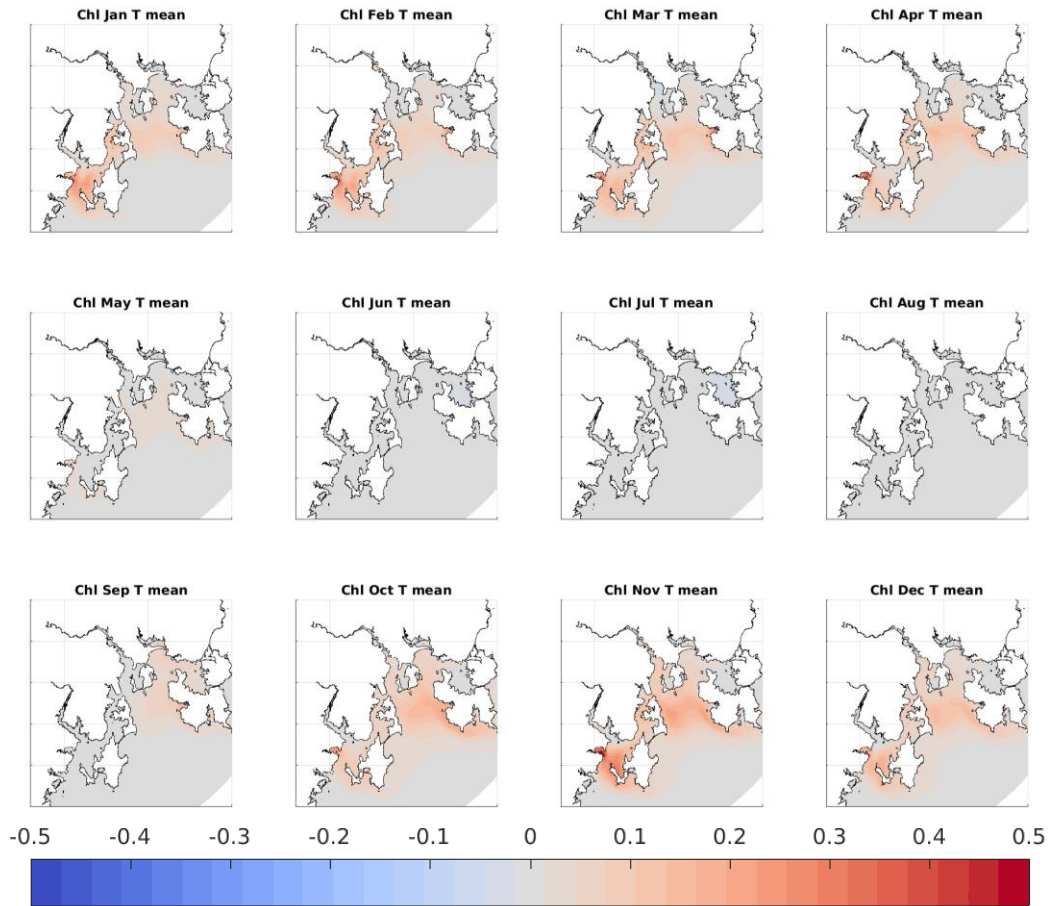
Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



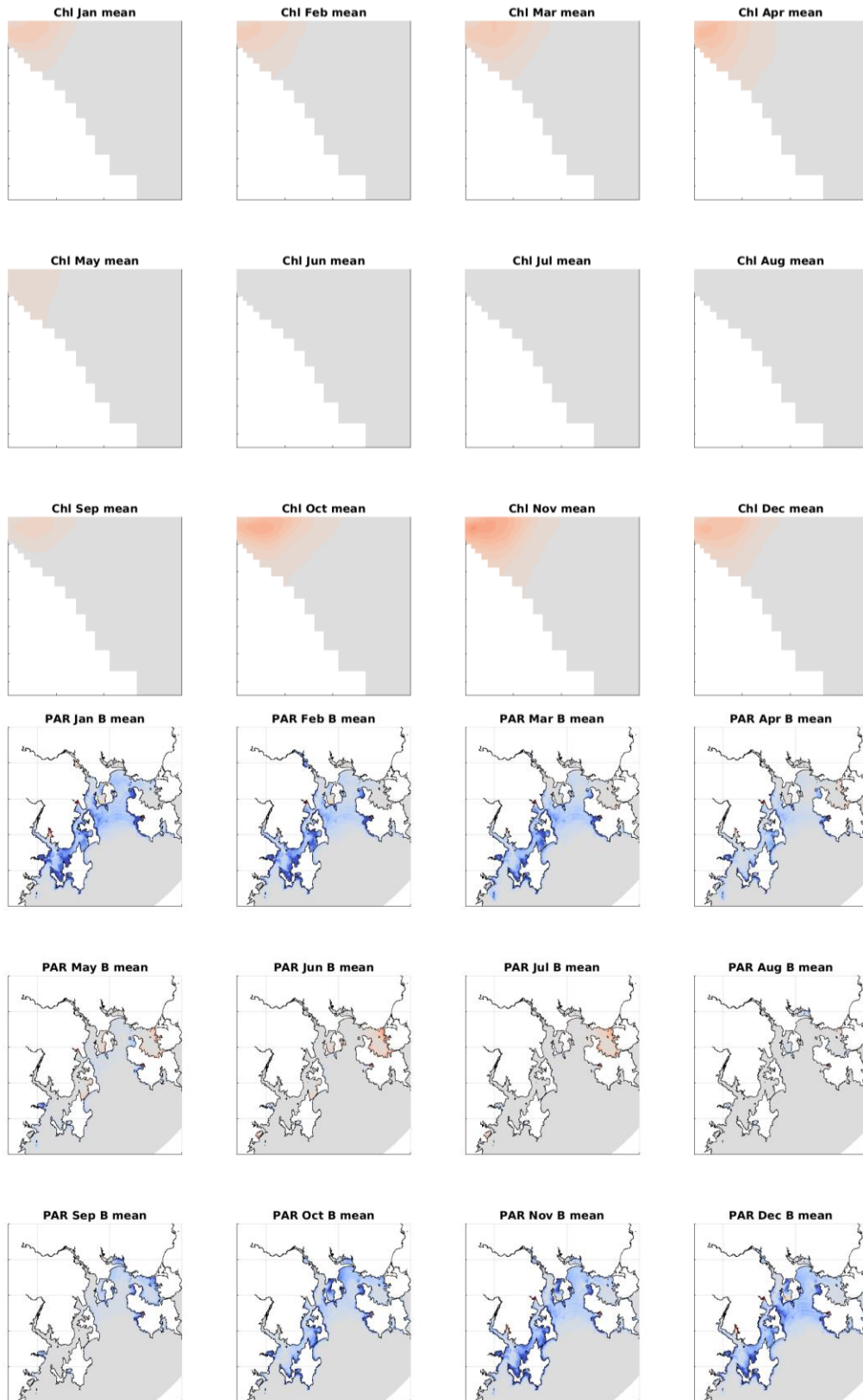
Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



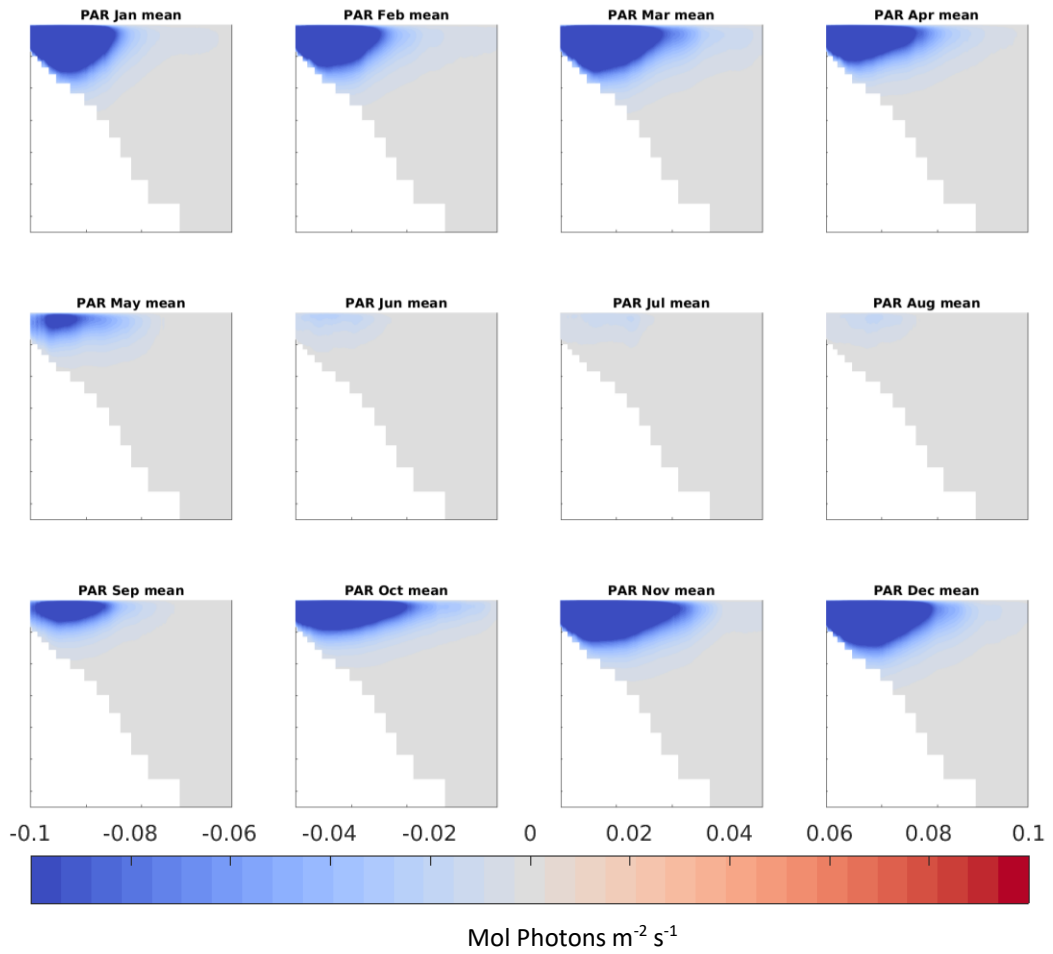
**Chl mg/m<sup>3</sup>**



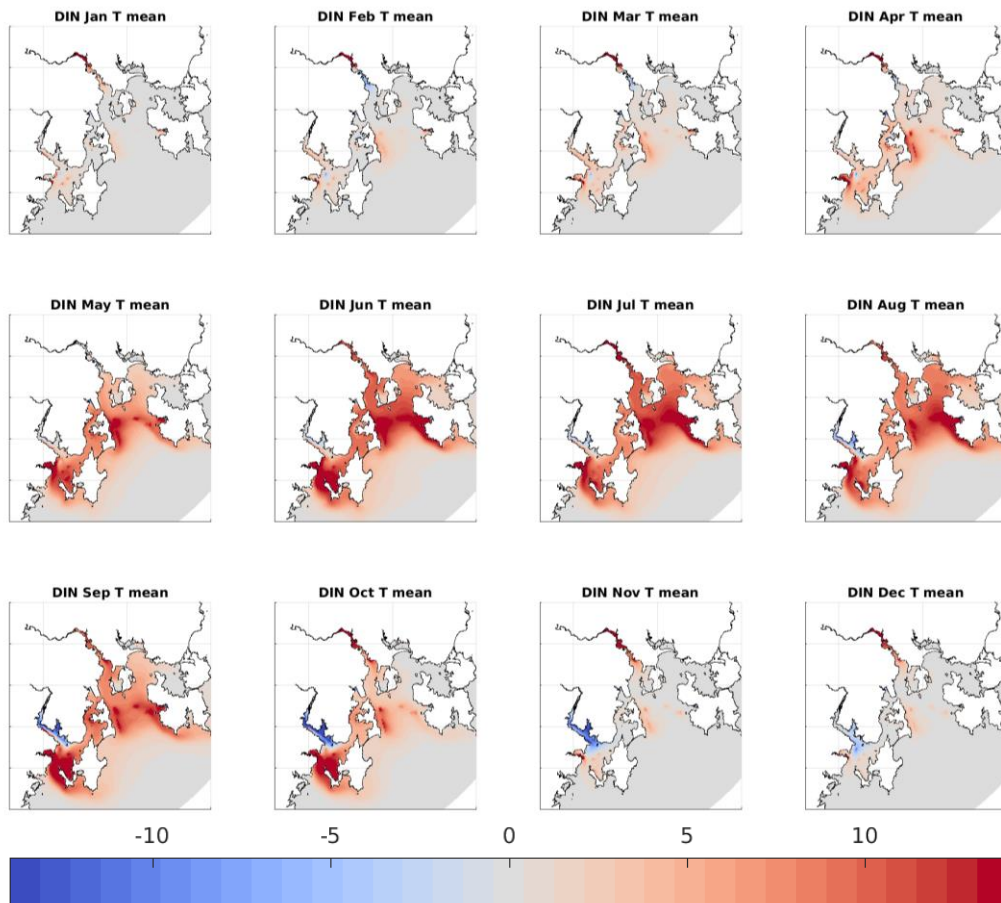
Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



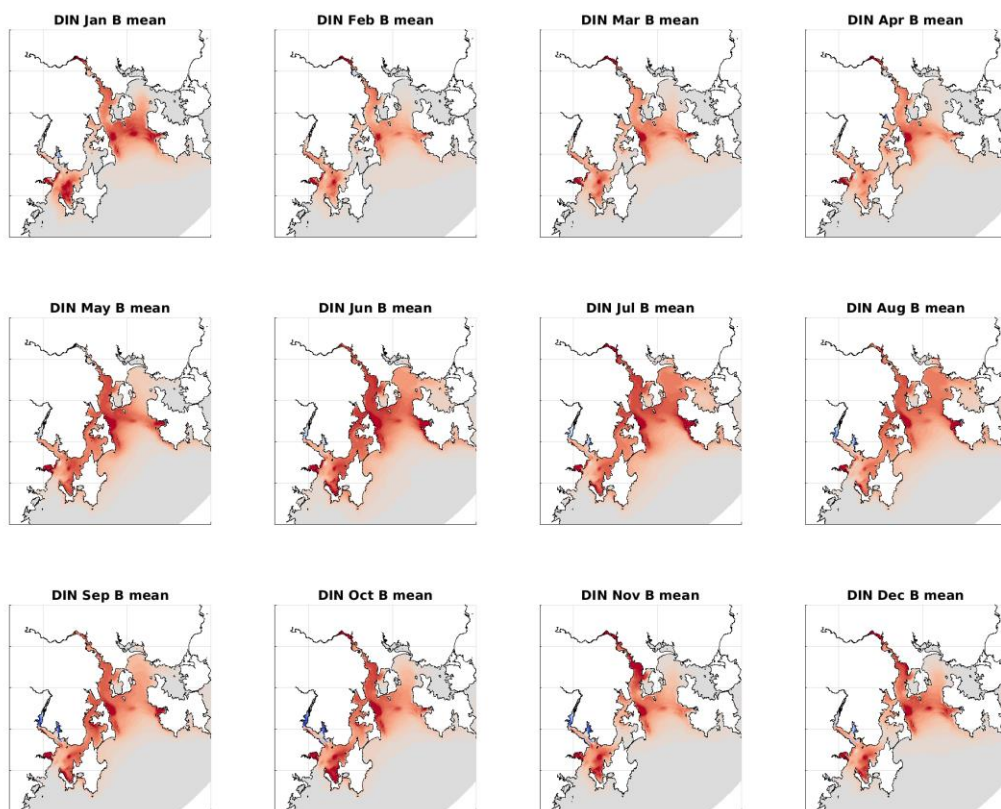
Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



Scenario #4 2020+2ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



**DIN mg/m3**

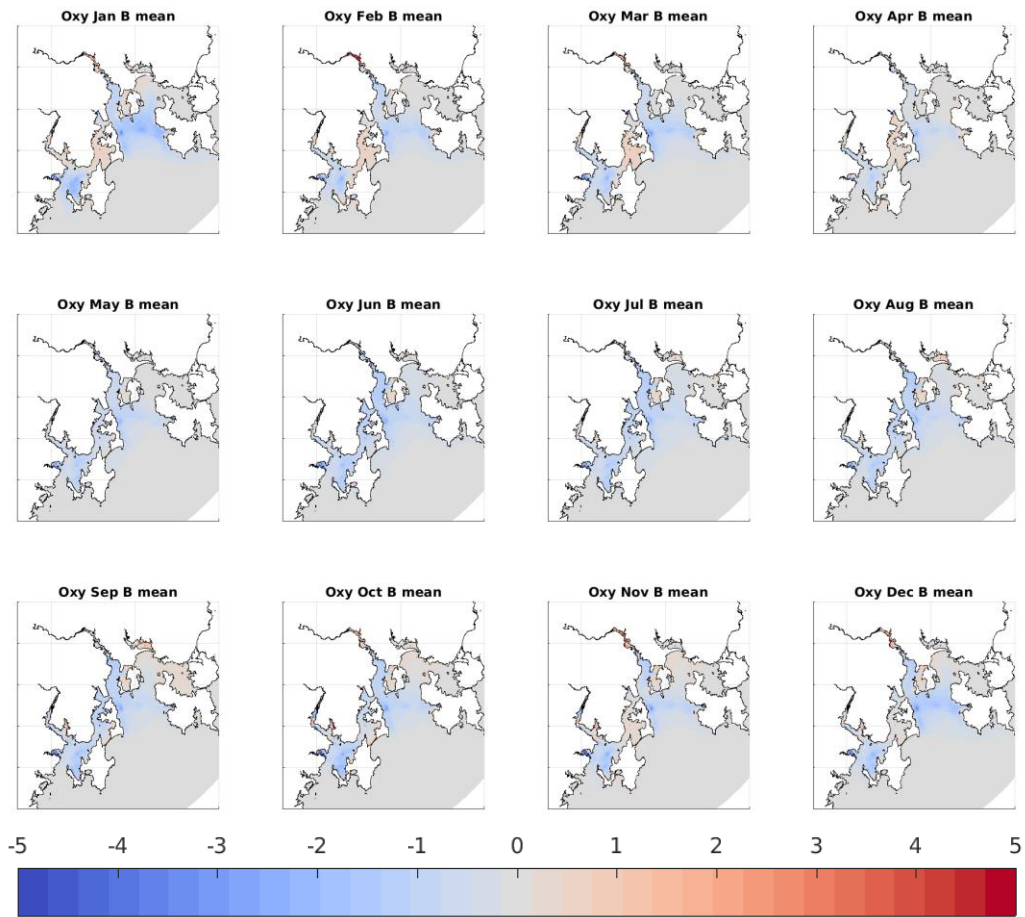


Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change

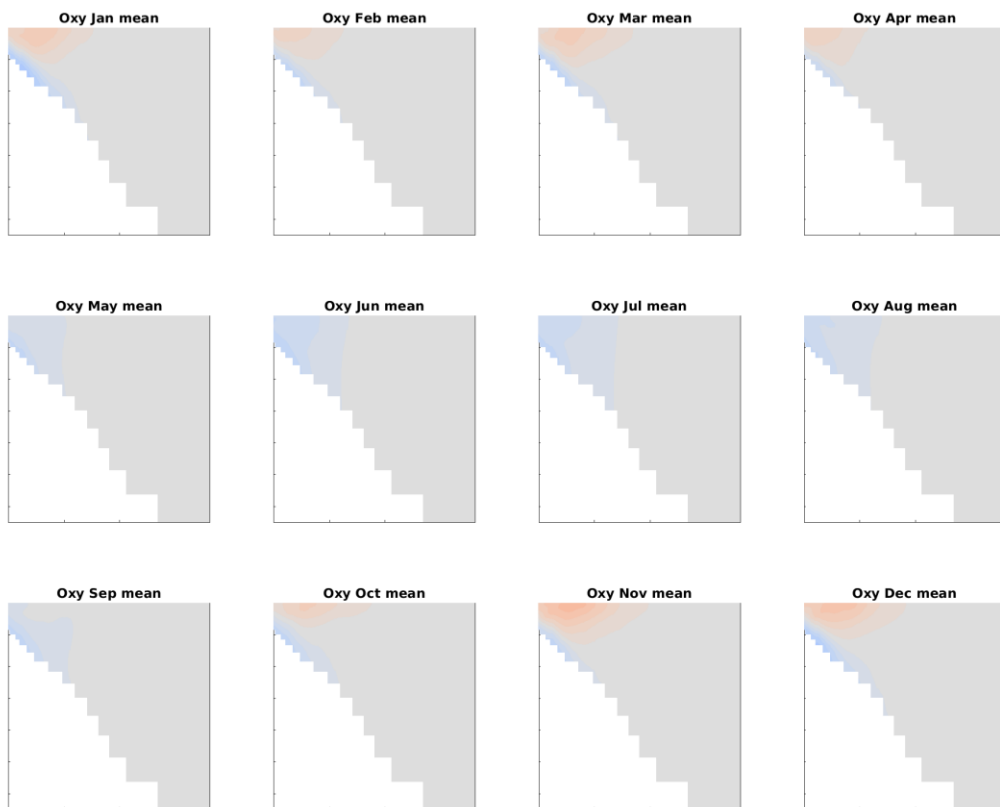




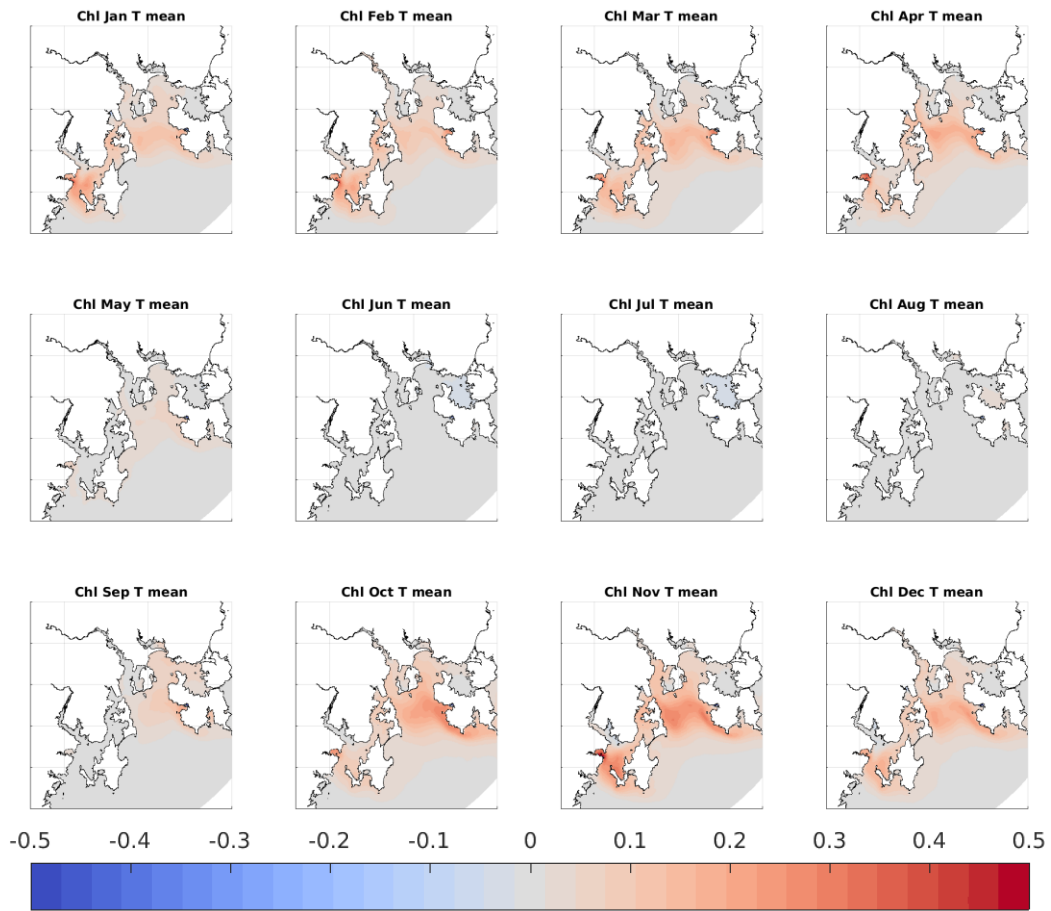
Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



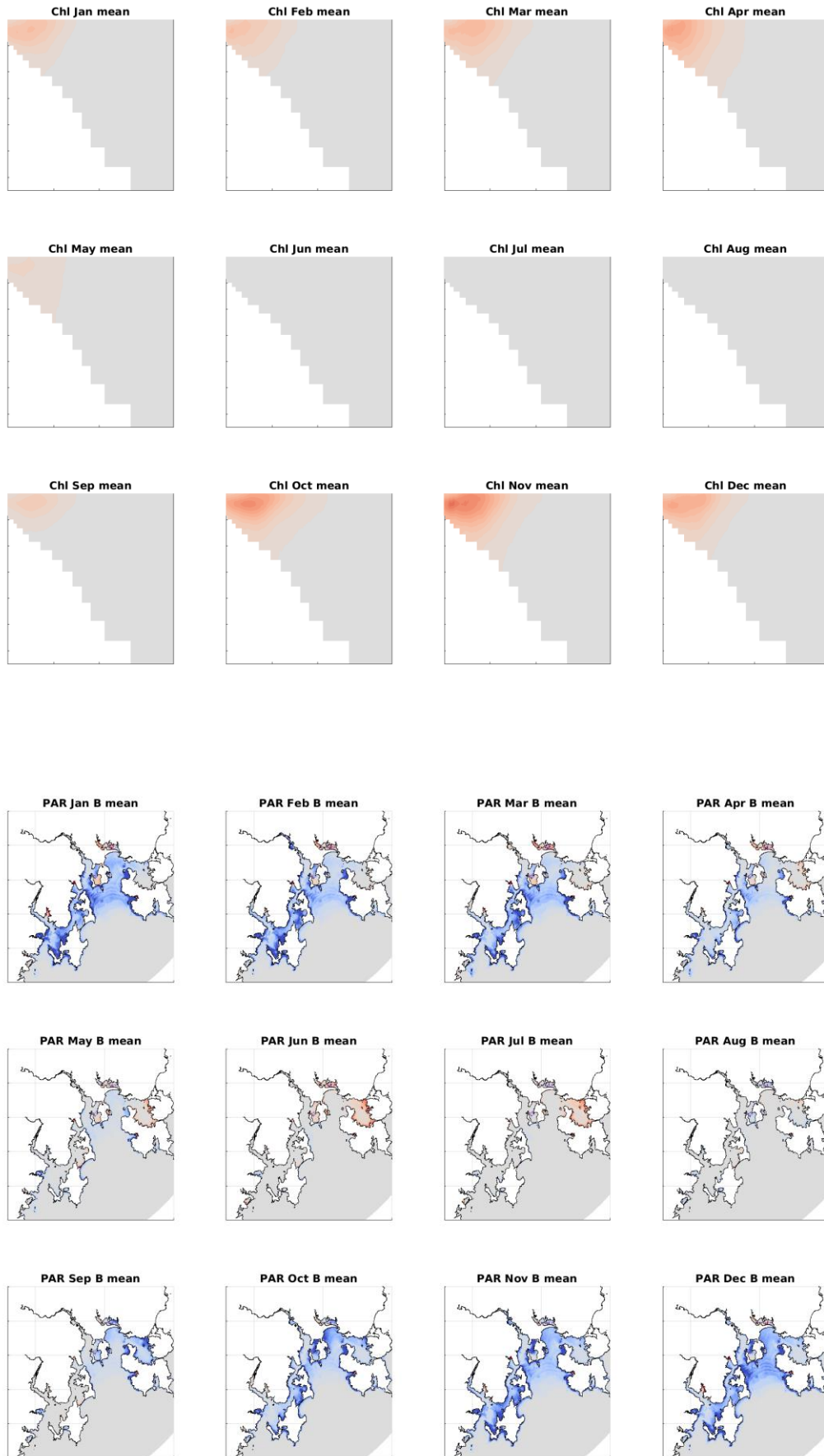
Oxygen % Saturation



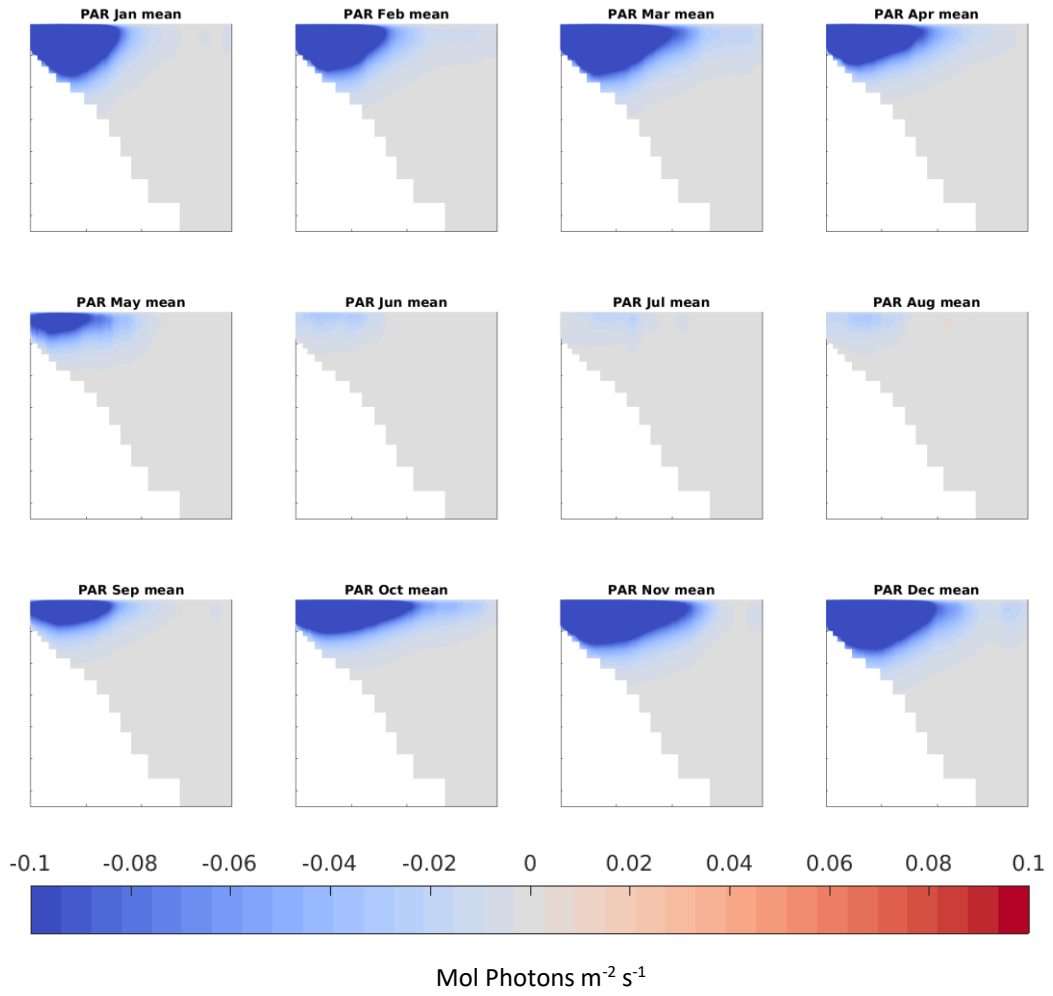
Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



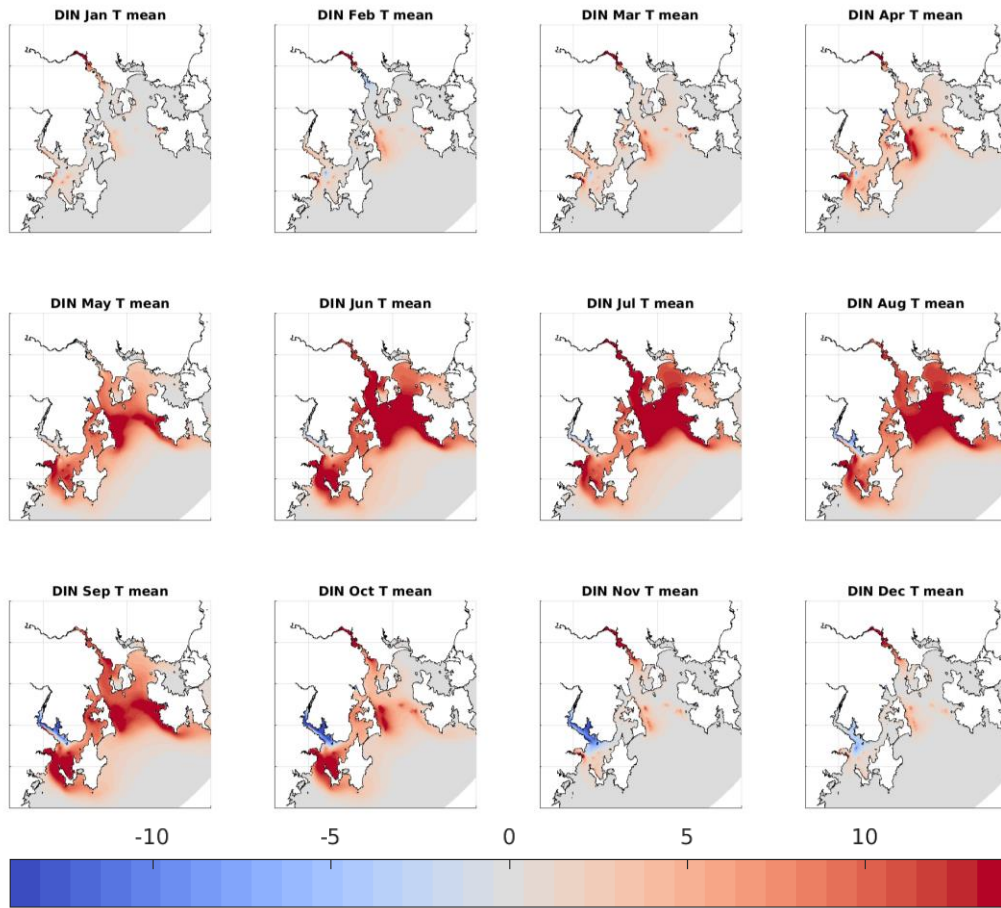
Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



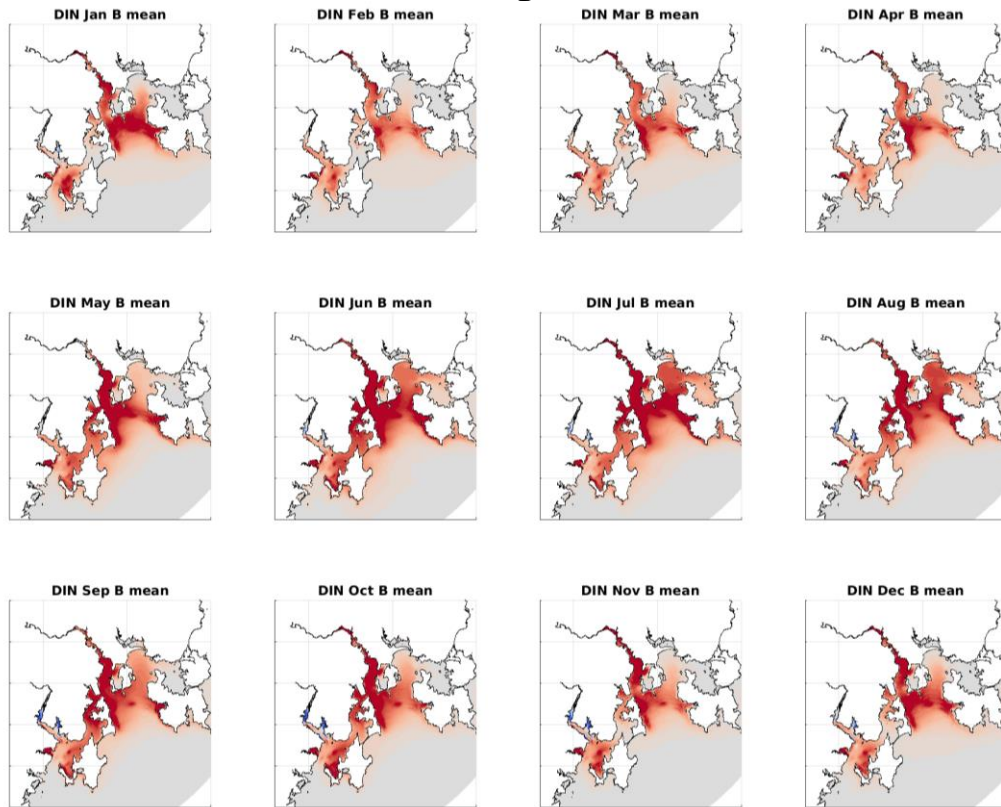
Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



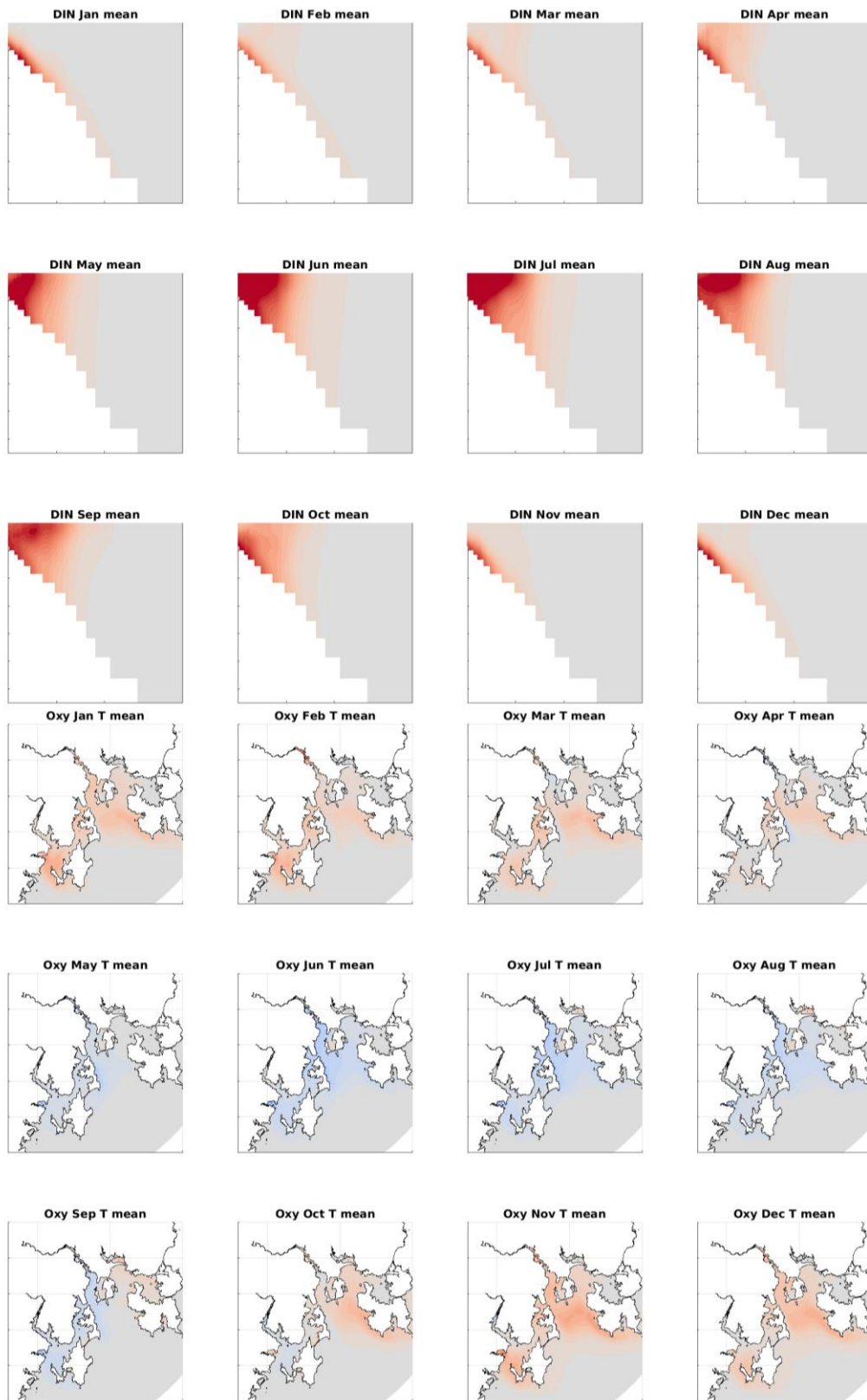
Scenario #4.5 2020+3ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change



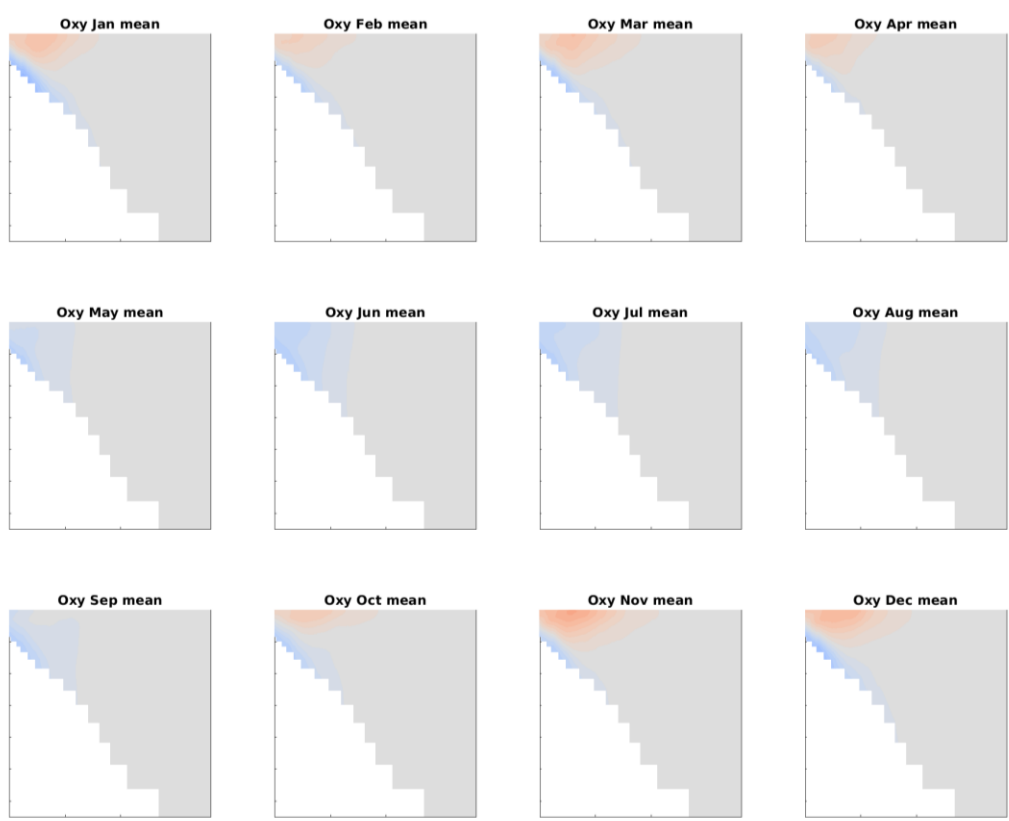
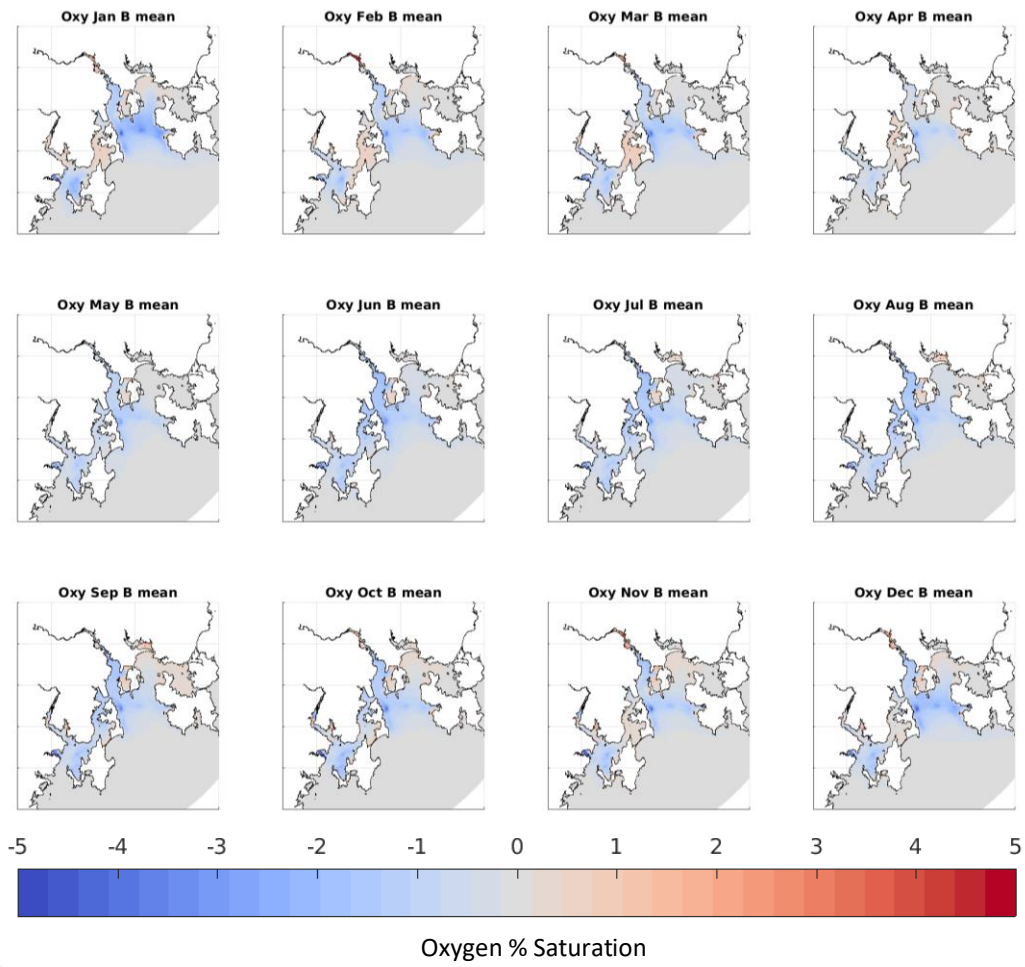
**DIN mg/m3**



Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change

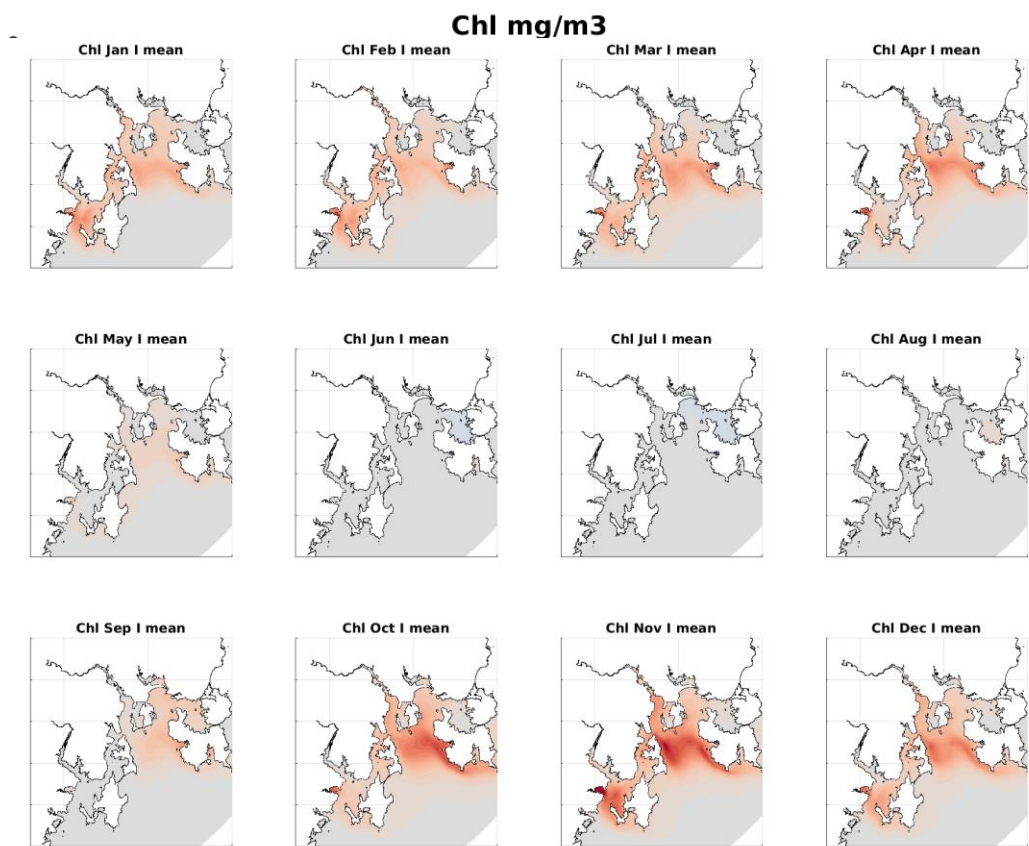
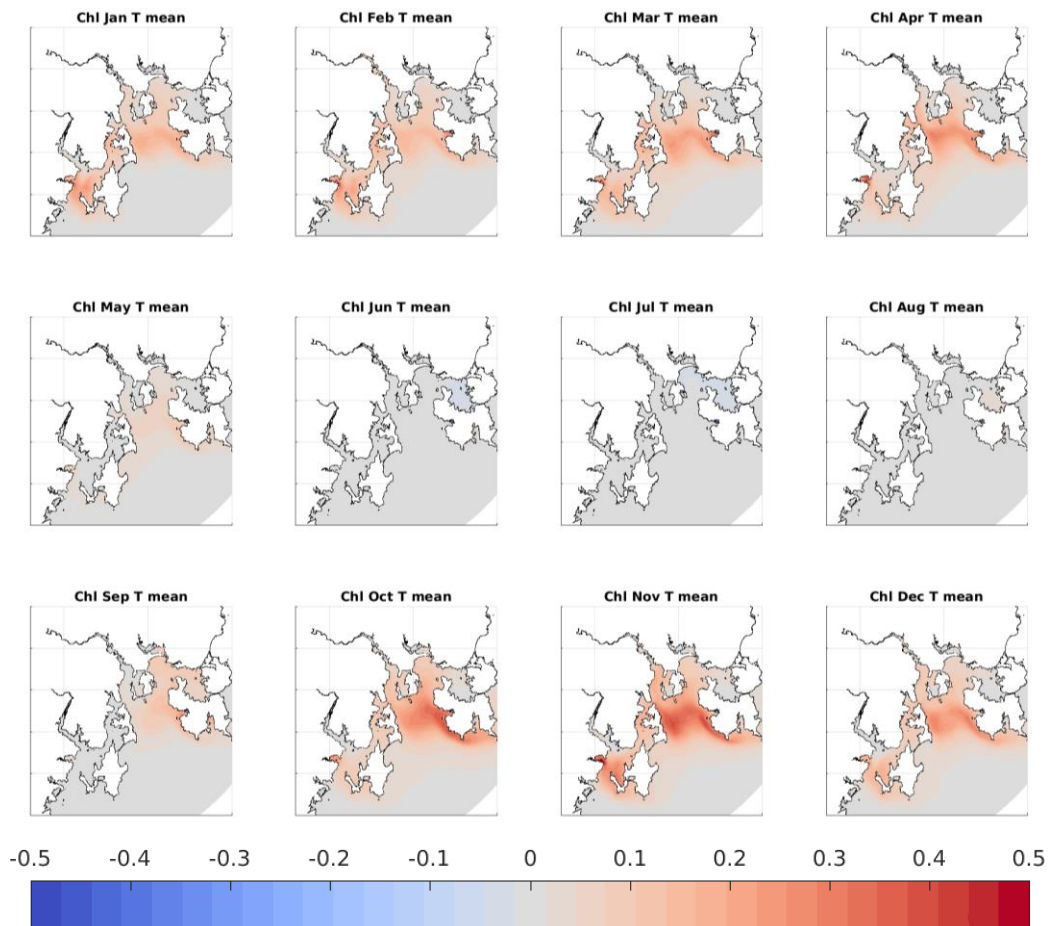


Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change

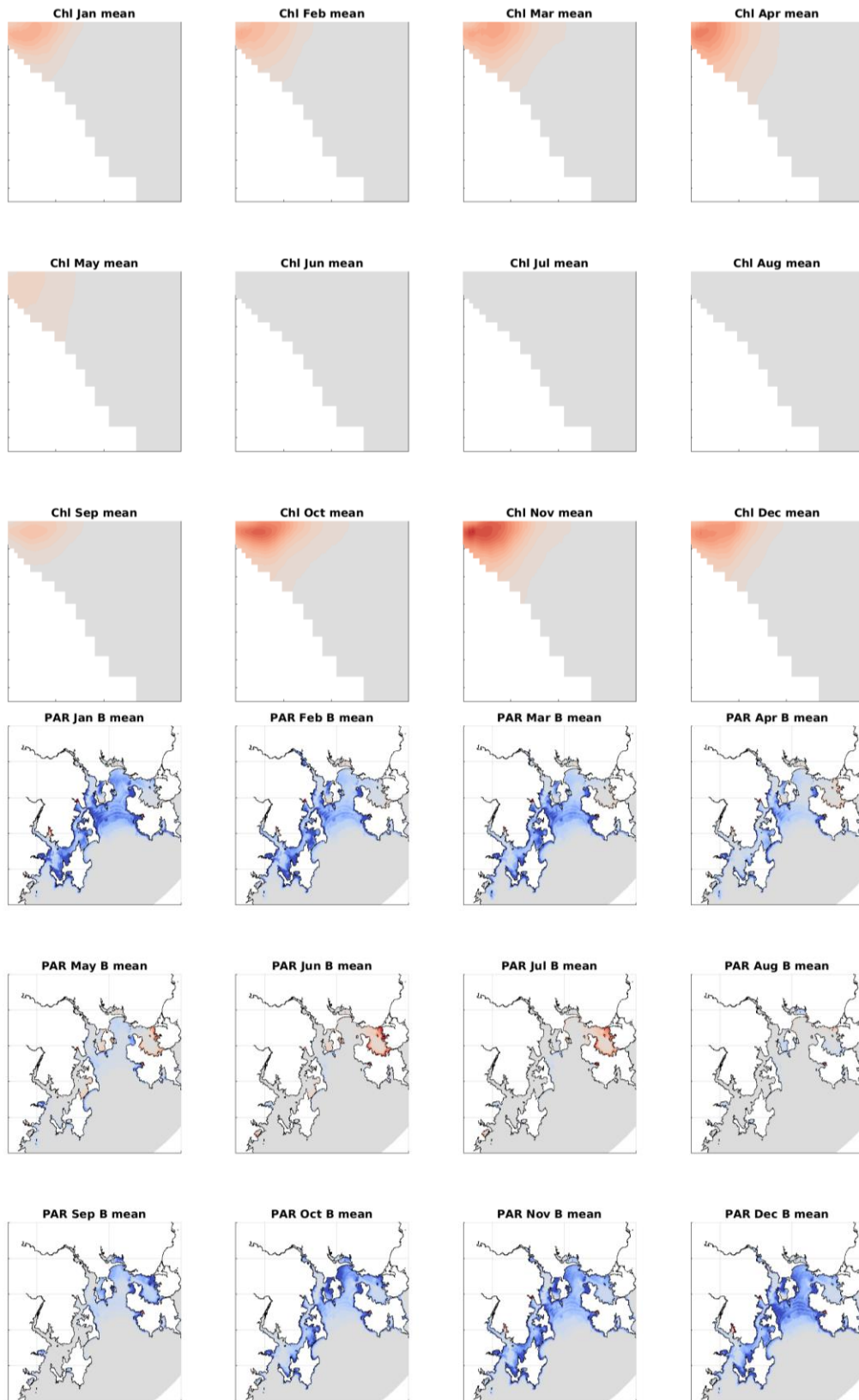


Scenario #5 2020+4.5kTn in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change

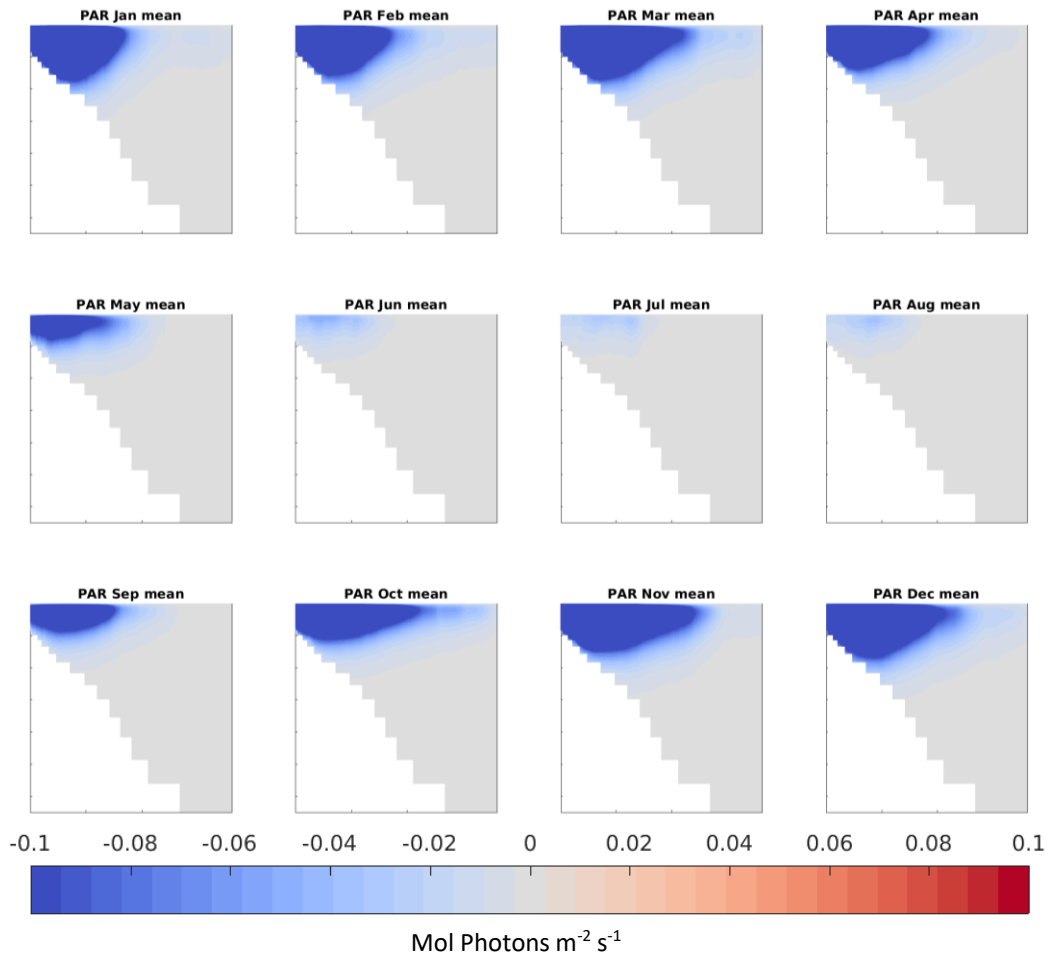




Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change

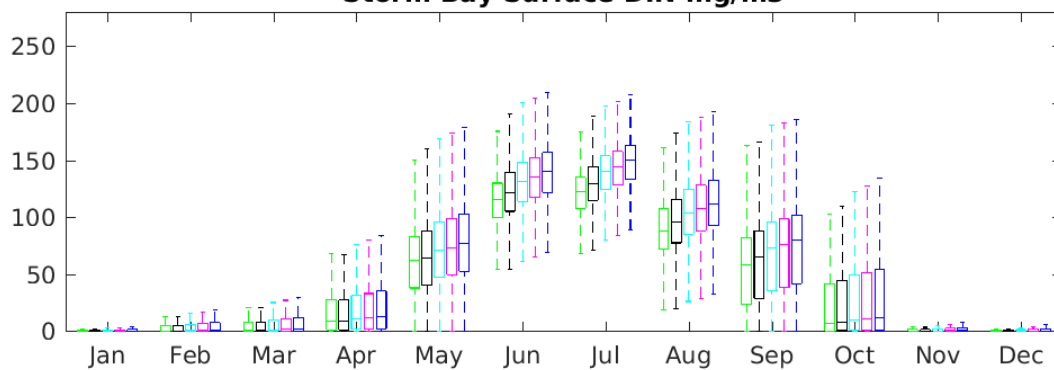


Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change

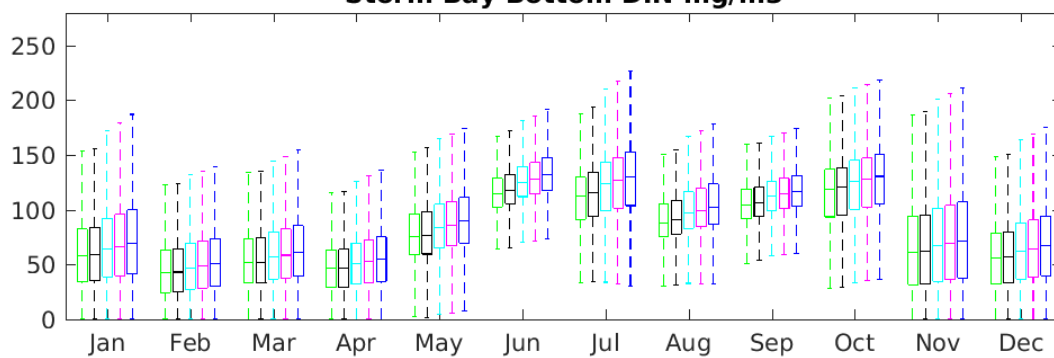


Scenario #5 2020+4.5ktN in Storm Bay - Scenario #3 Pre-Storm Bay (circa 2013) Absolute Change

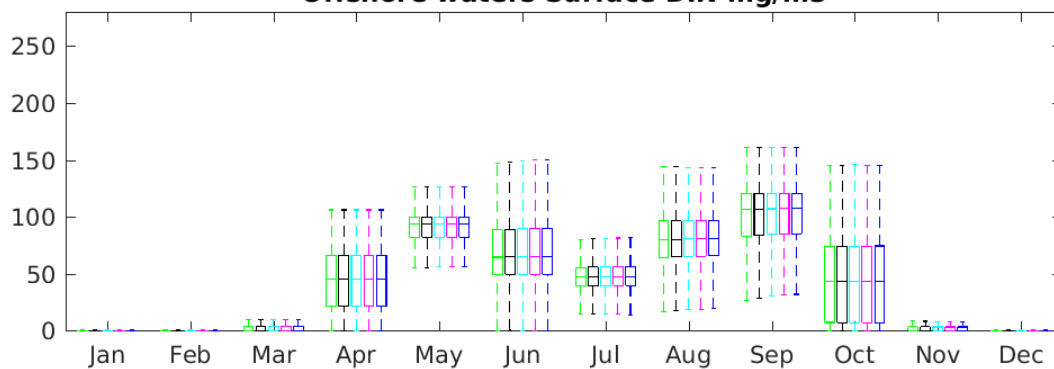
**Storm Bay Surface DIN mg/m3**



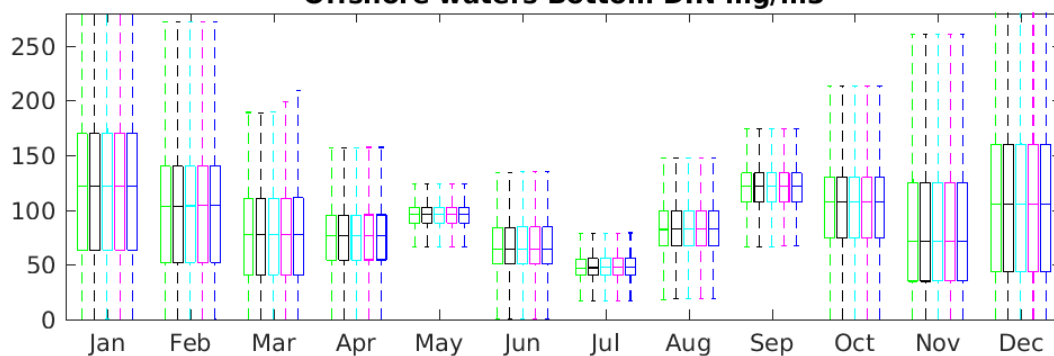
**Storm Bay Bottom DIN mg/m3**



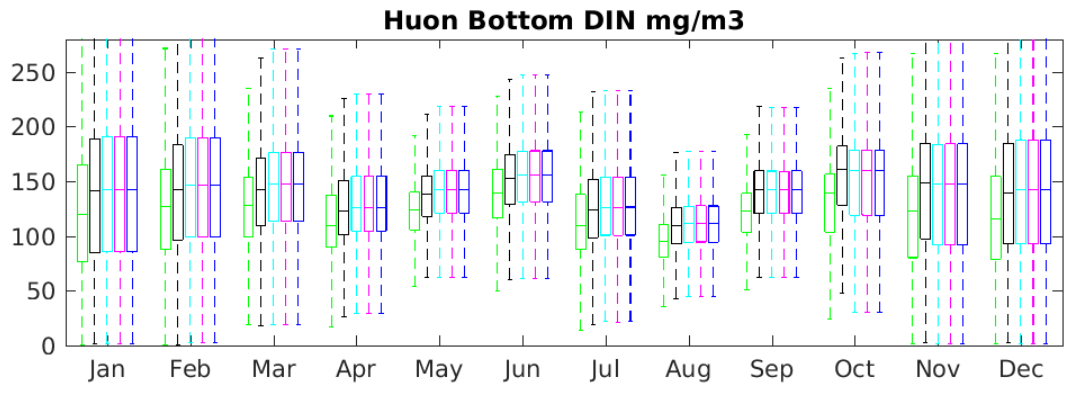
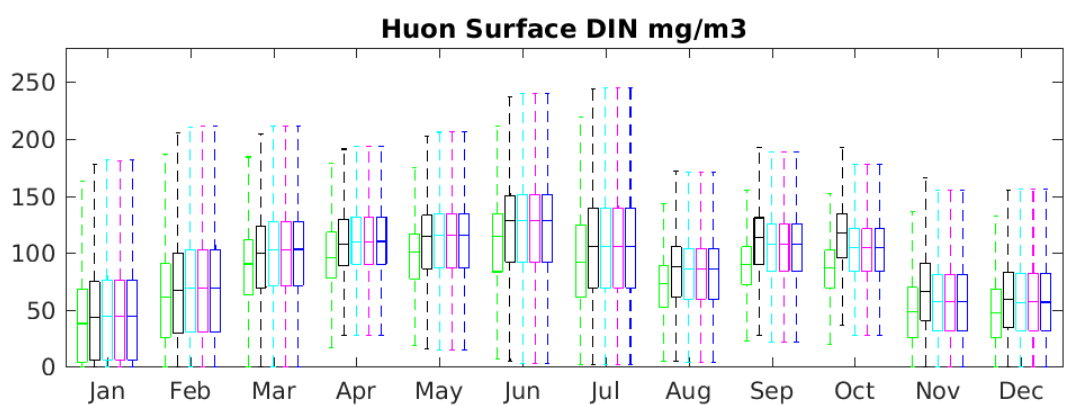
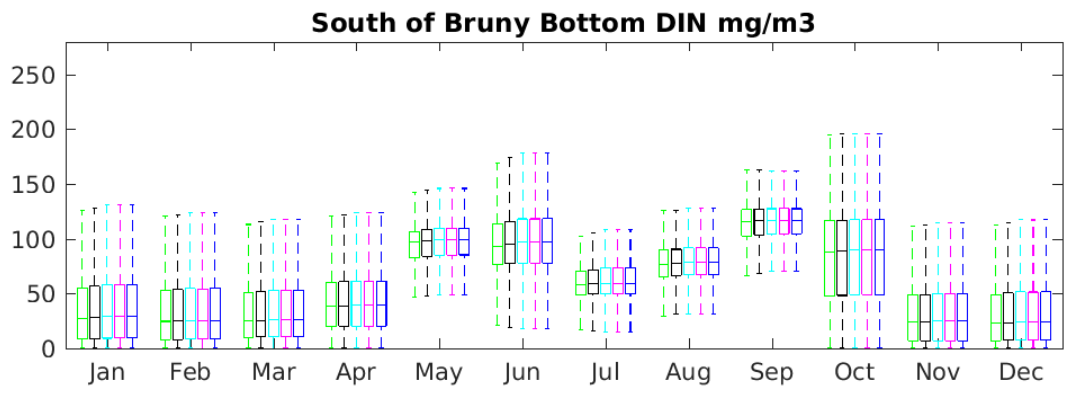
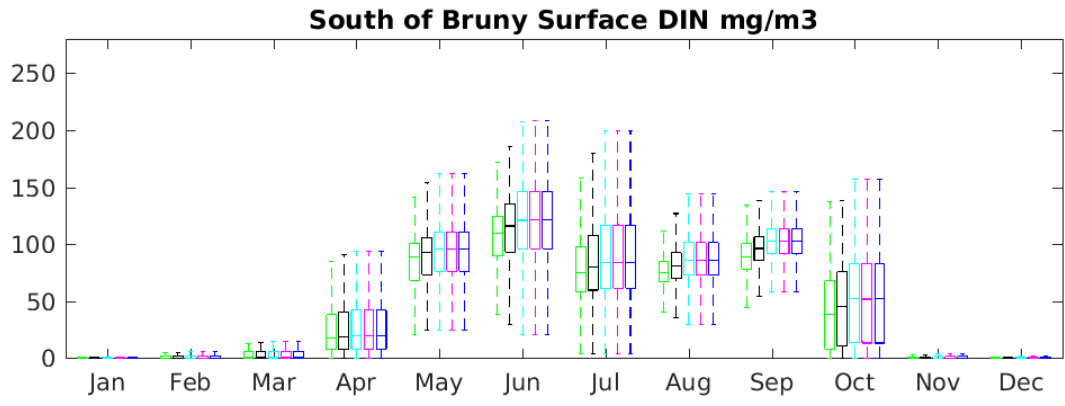
**Offshore waters Surface DIN mg/m3**



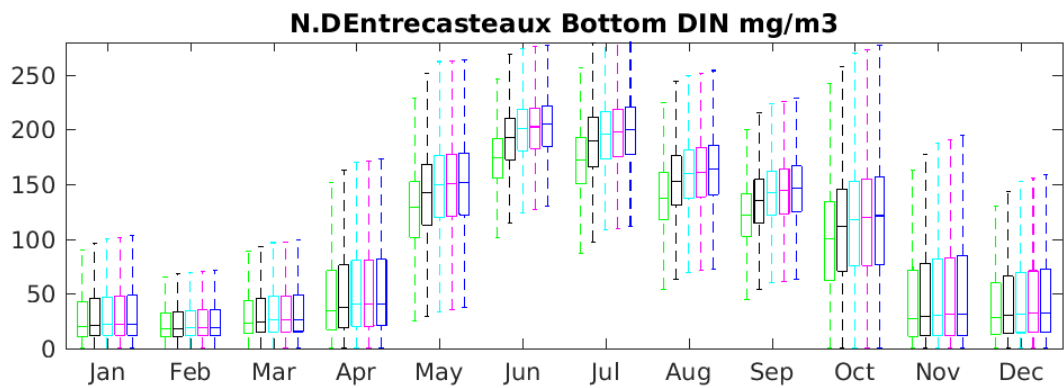
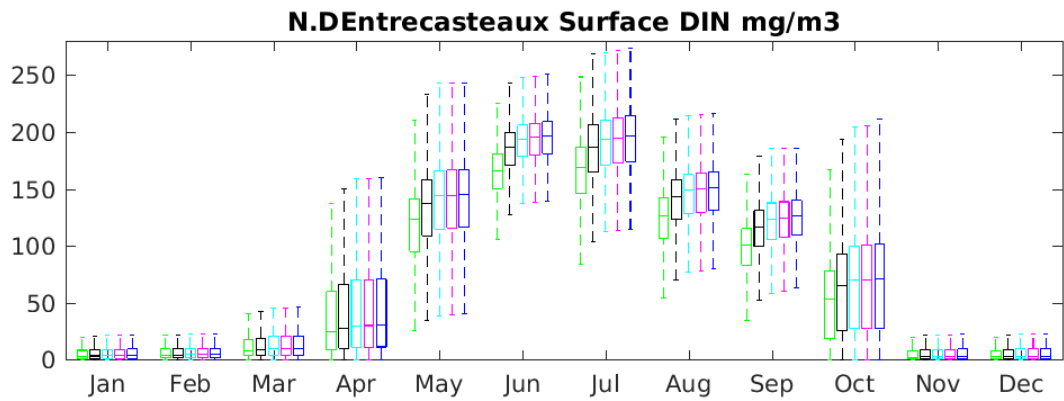
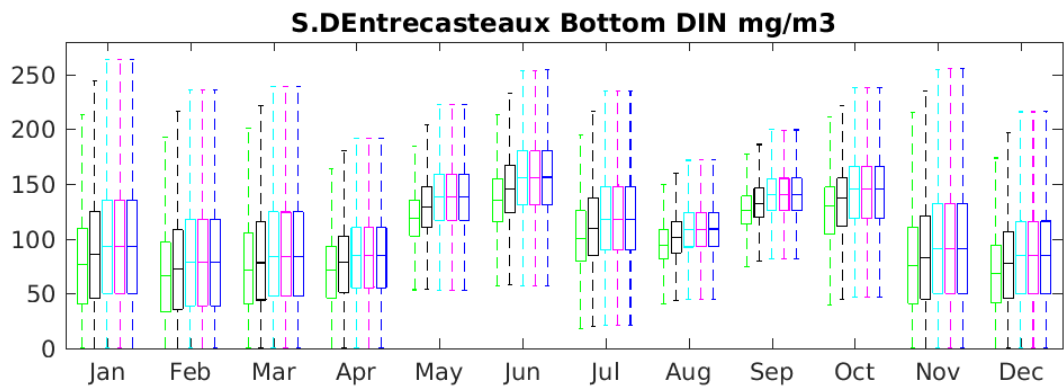
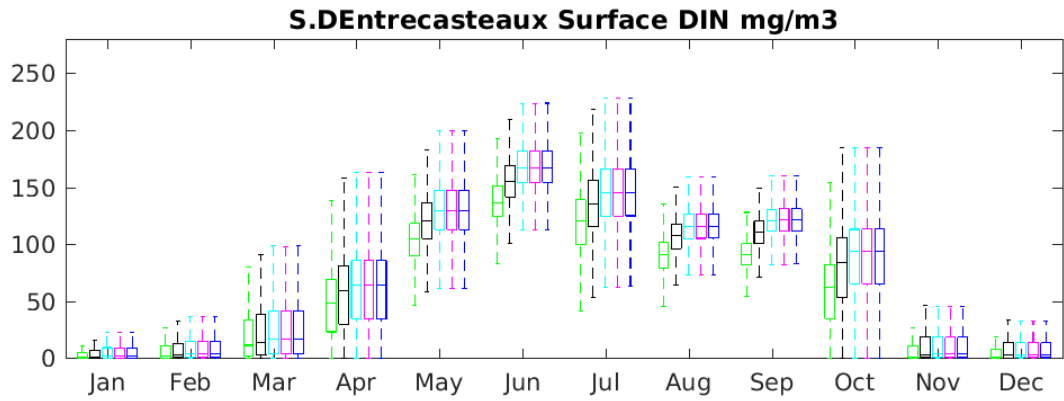
**Offshore waters Bottom DIN mg/m3**



#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

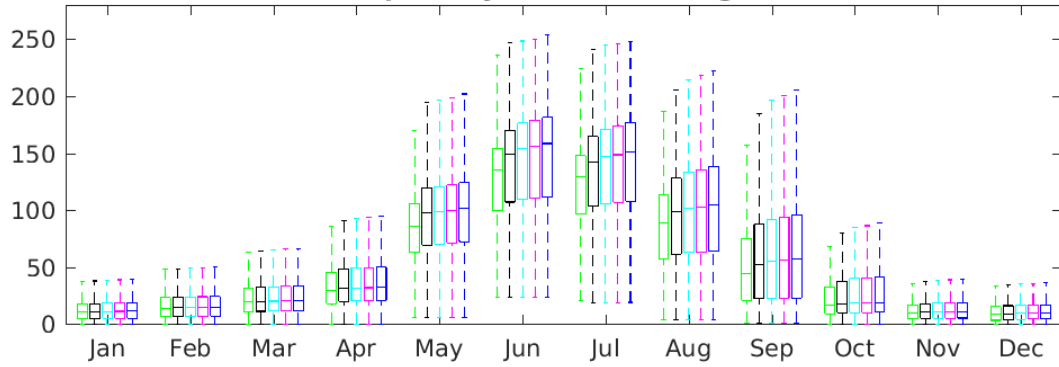


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

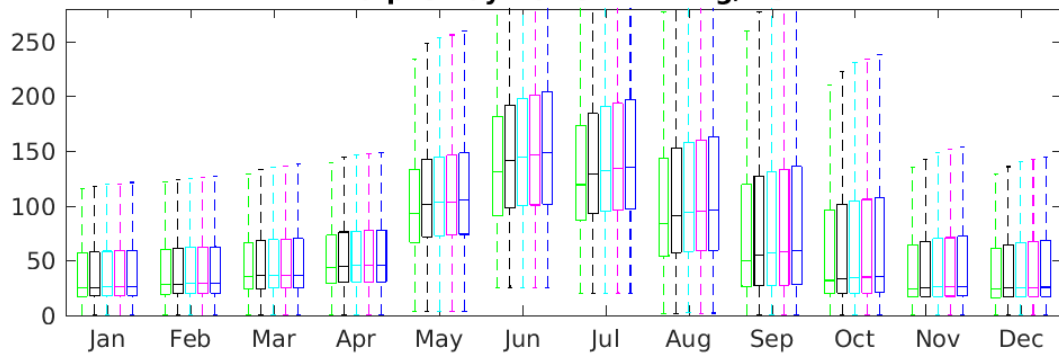


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

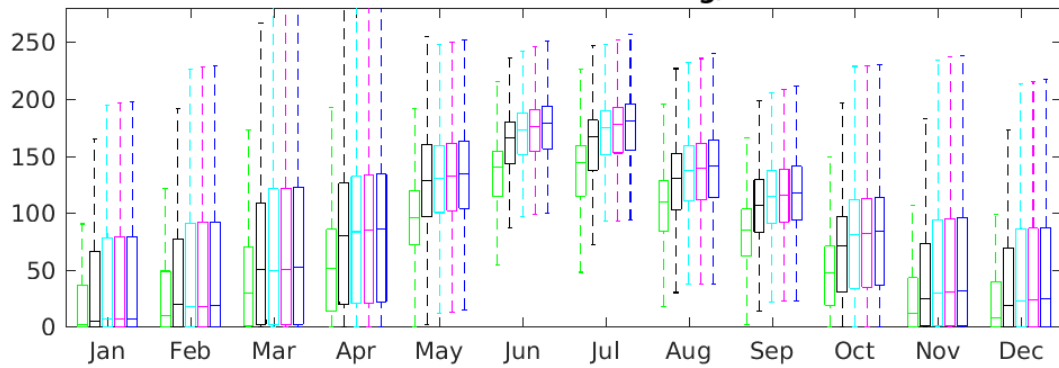
**Ralphps Bay Surface DIN mg/m3**



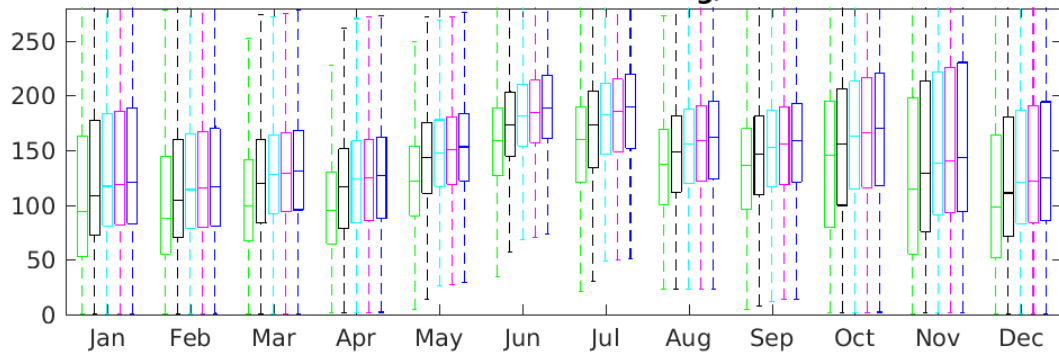
**Ralphps Bay Bottom DIN mg/m3**



**Derwent Surface DIN mg/m3**

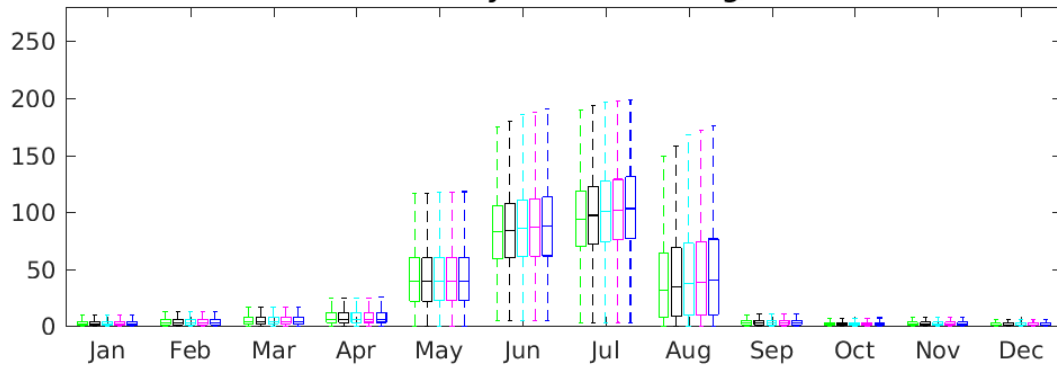


**Derwent Bottom DIN mg/m3**

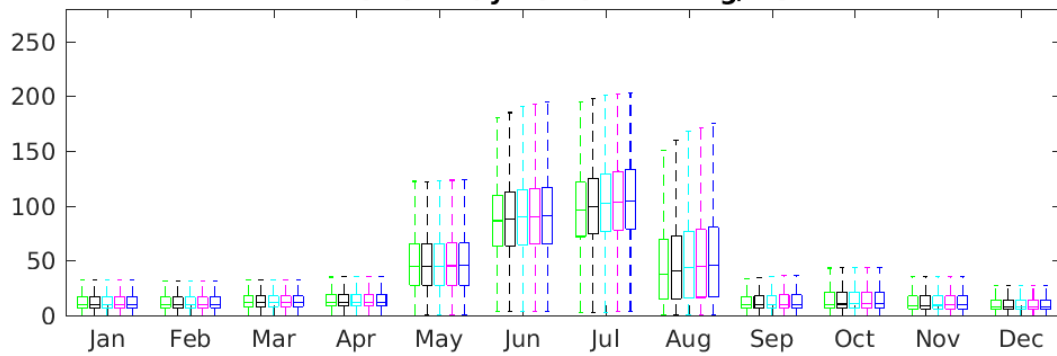


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

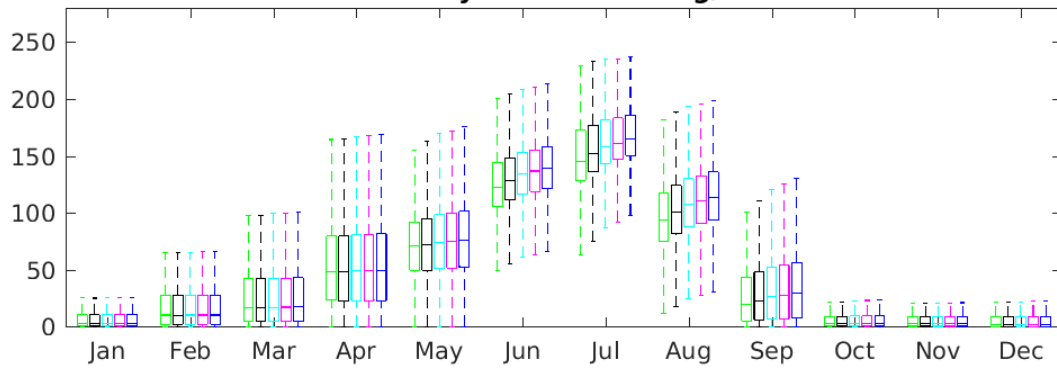
**Norfolk Bay Surface DIN mg/m3**



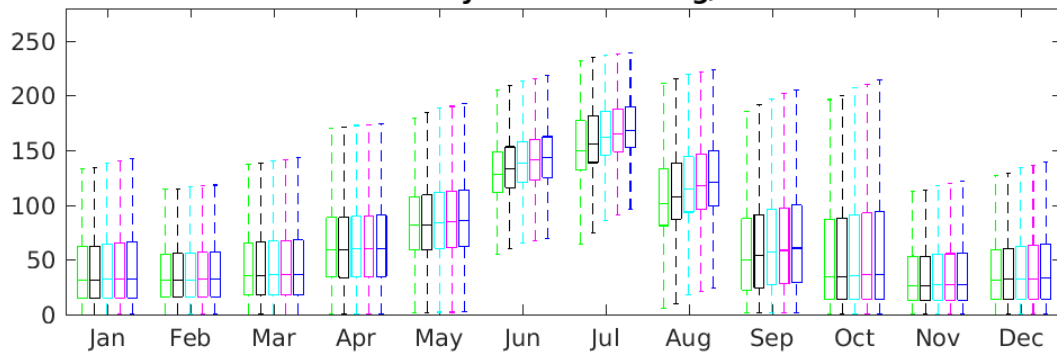
**Norfolk Bay Bottom DIN mg/m3**



**F-H Bay Surface DIN mg/m3**

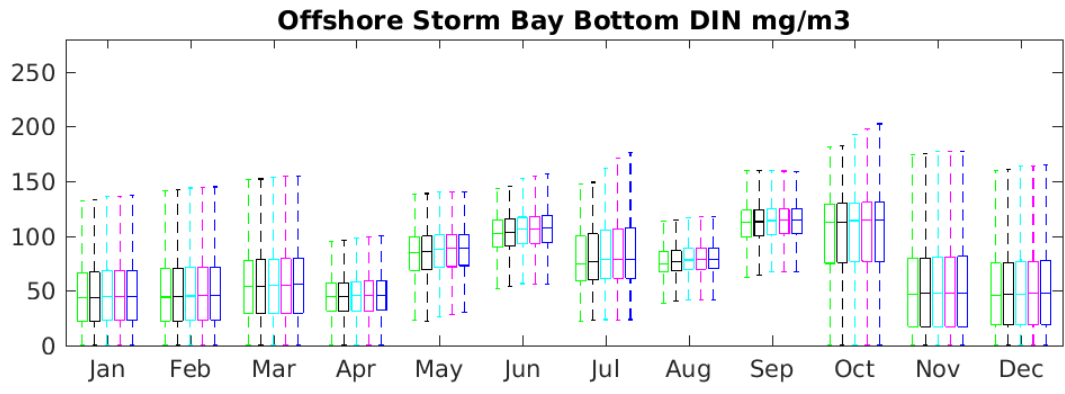
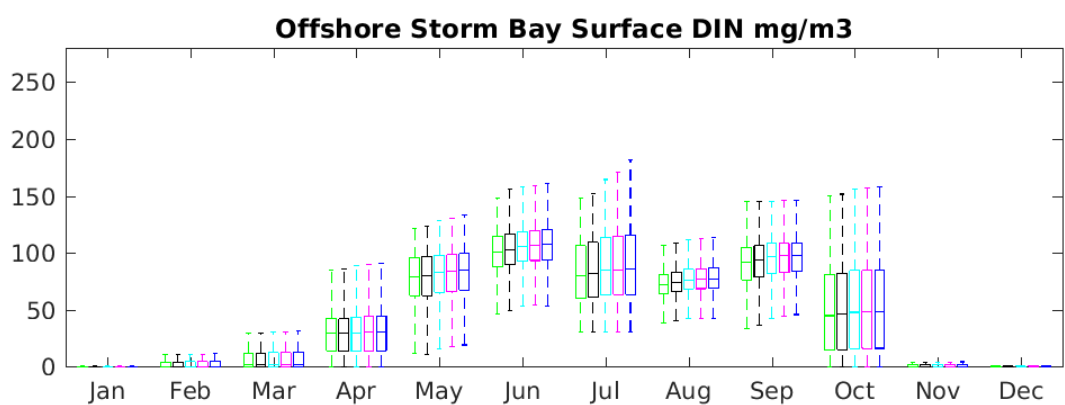
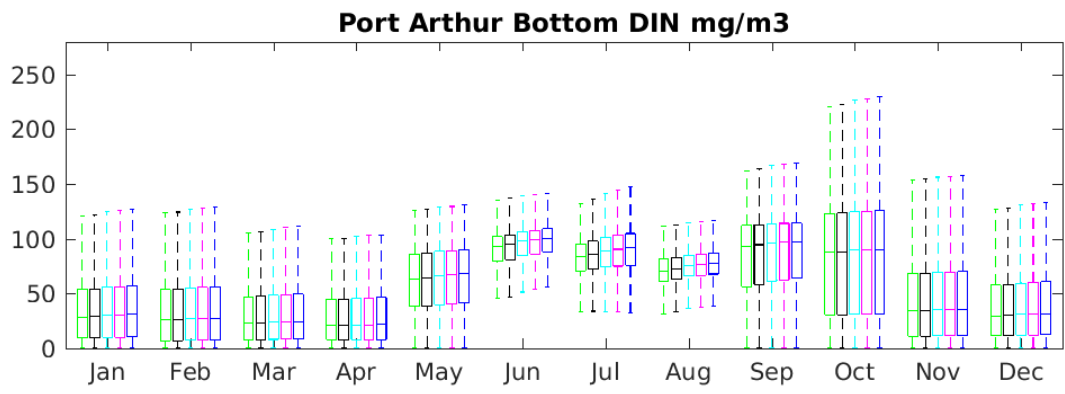
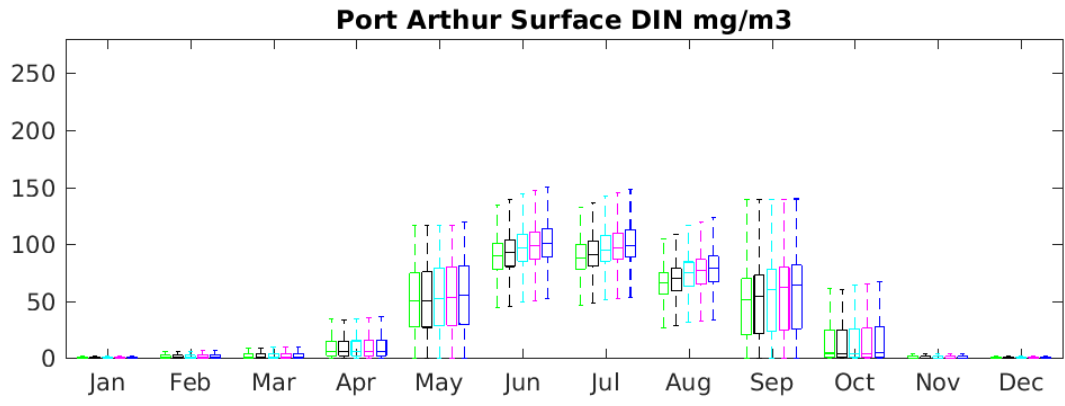


**F-H Bay Bottom DIN mg/m3**

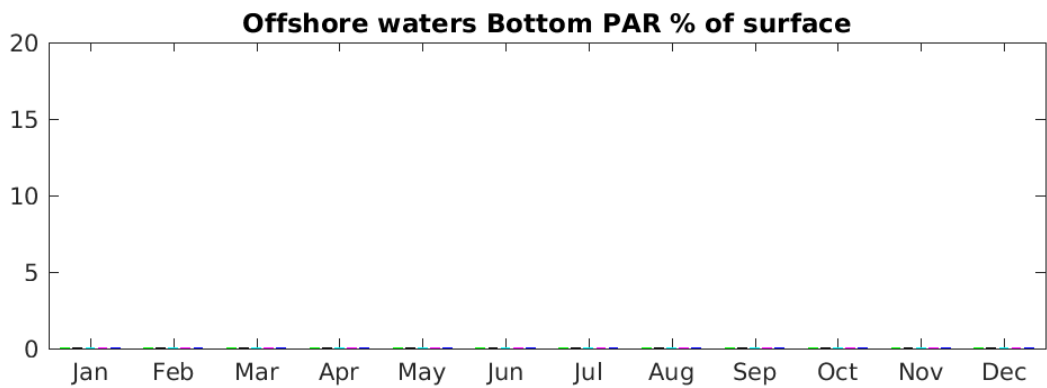
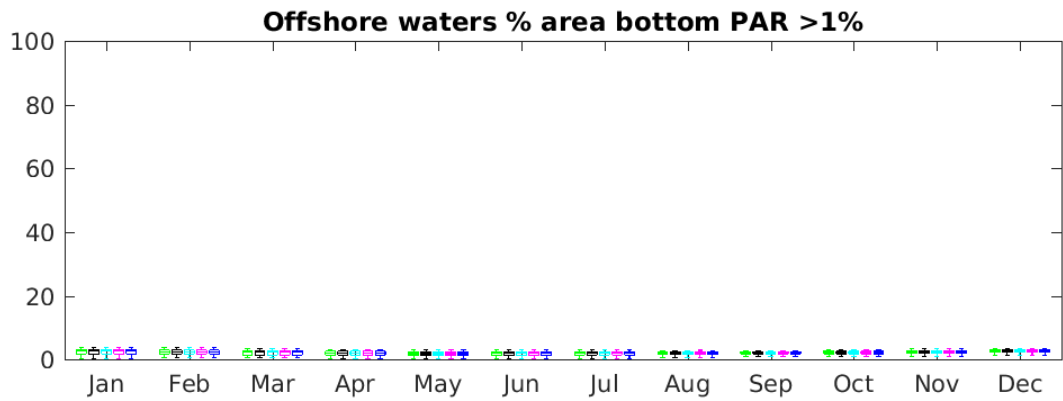
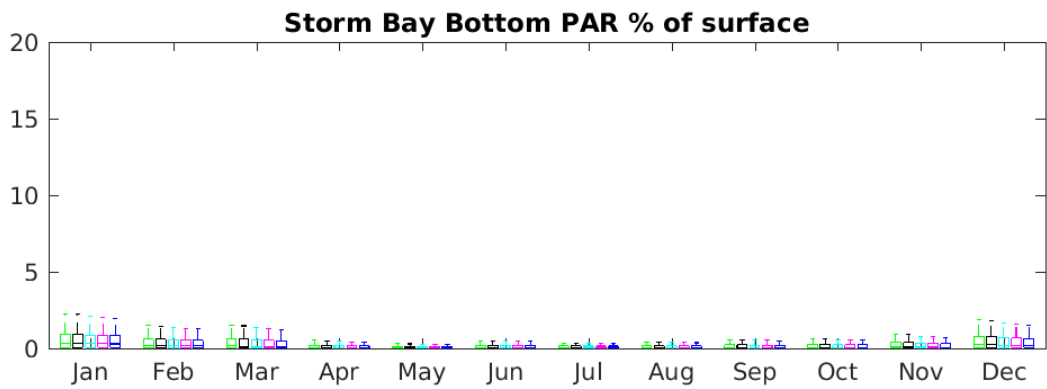
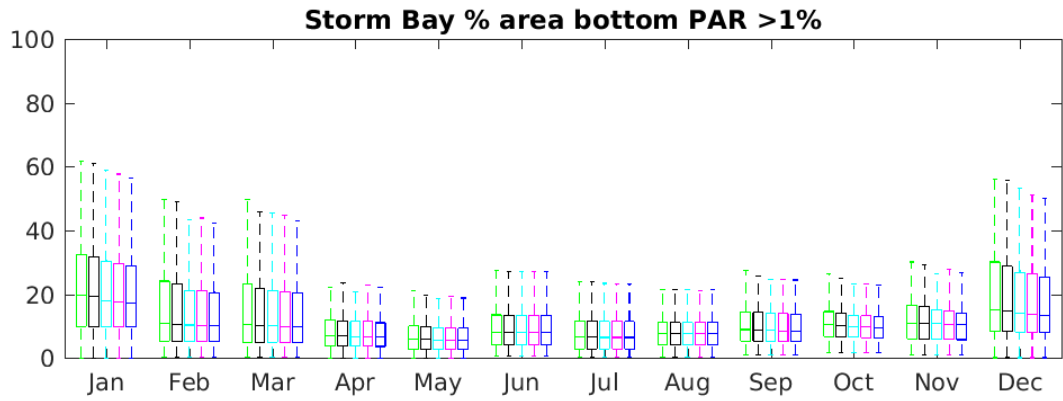


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

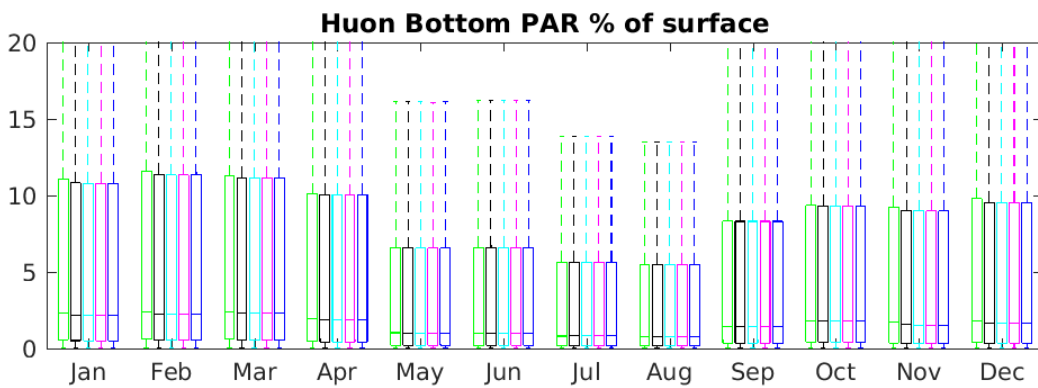
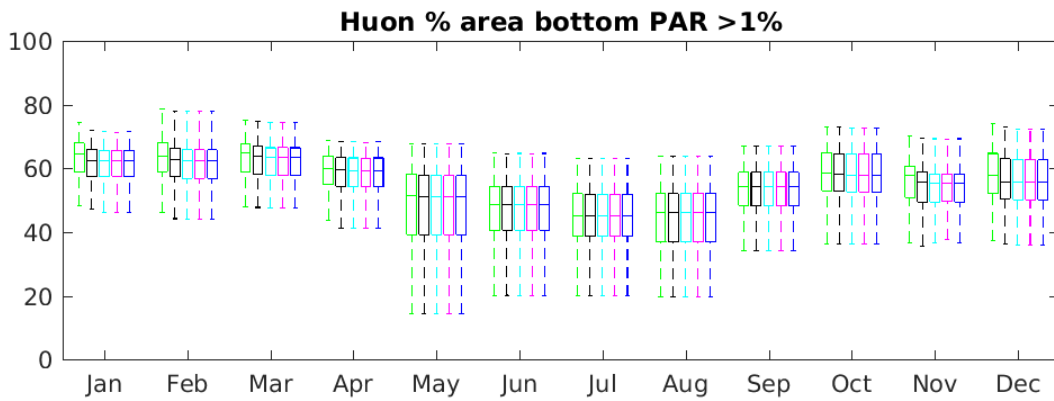
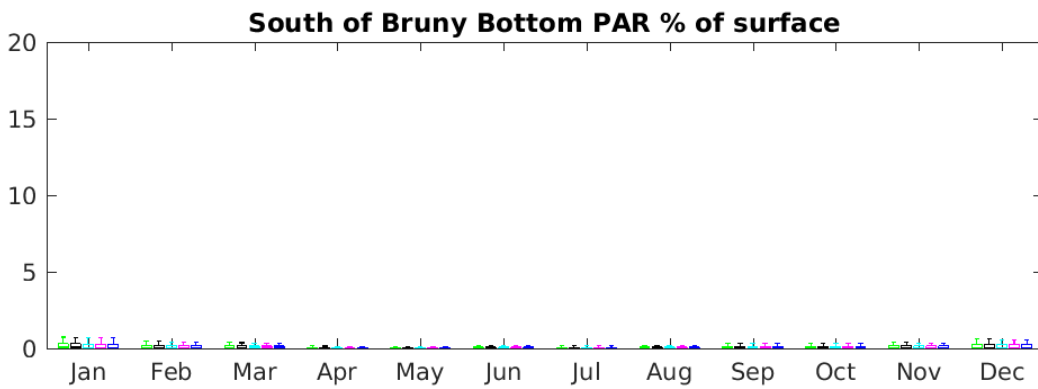
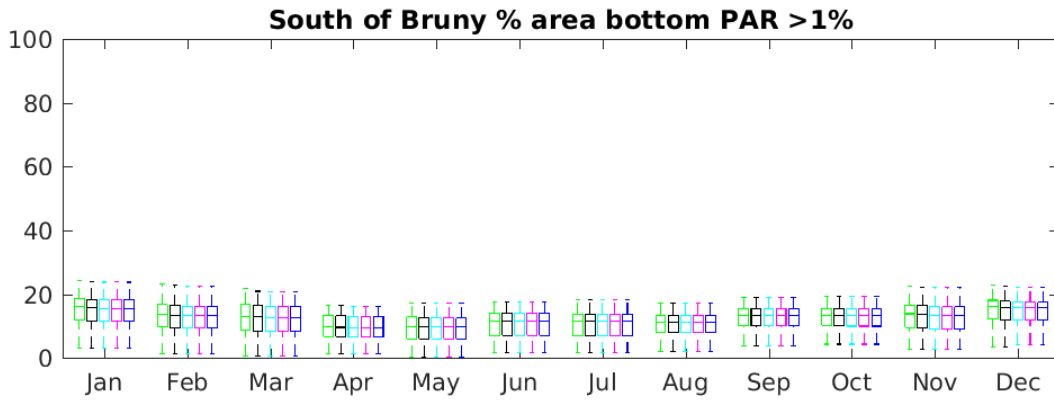




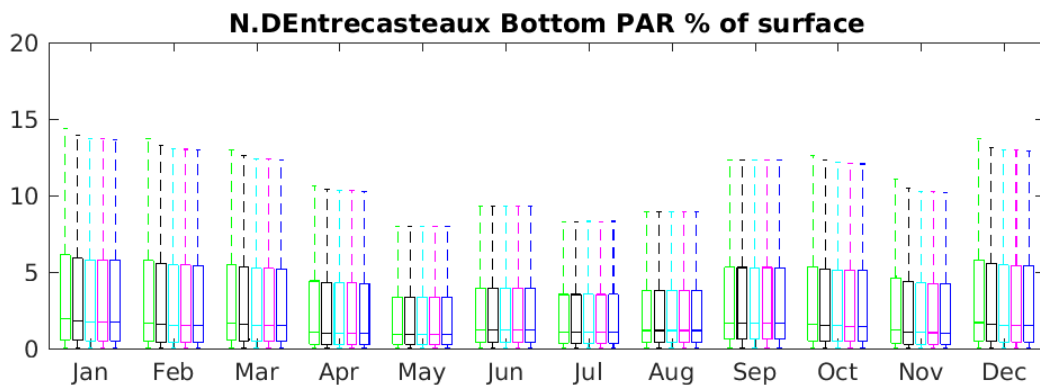
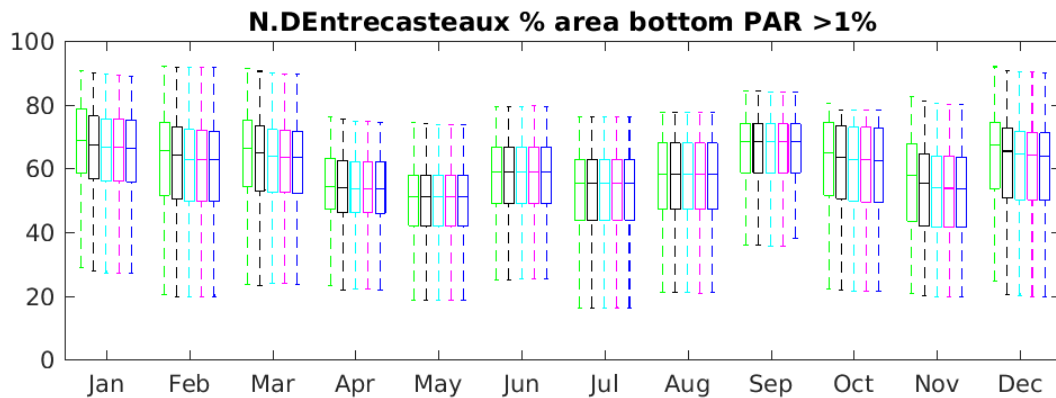
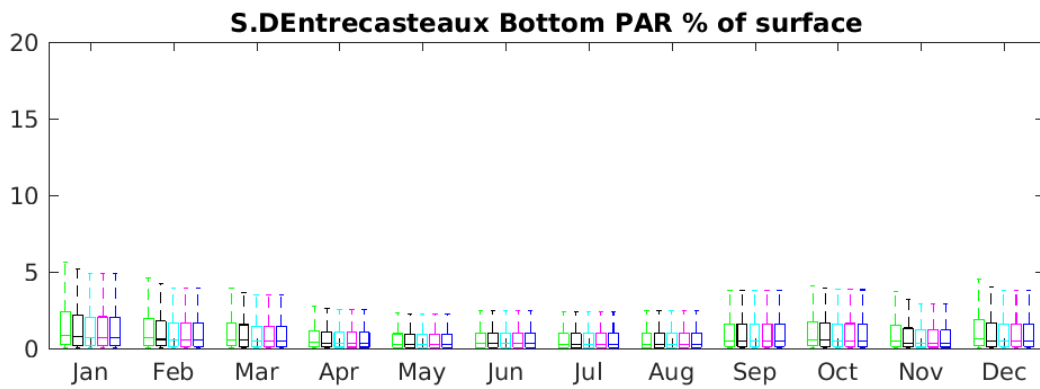
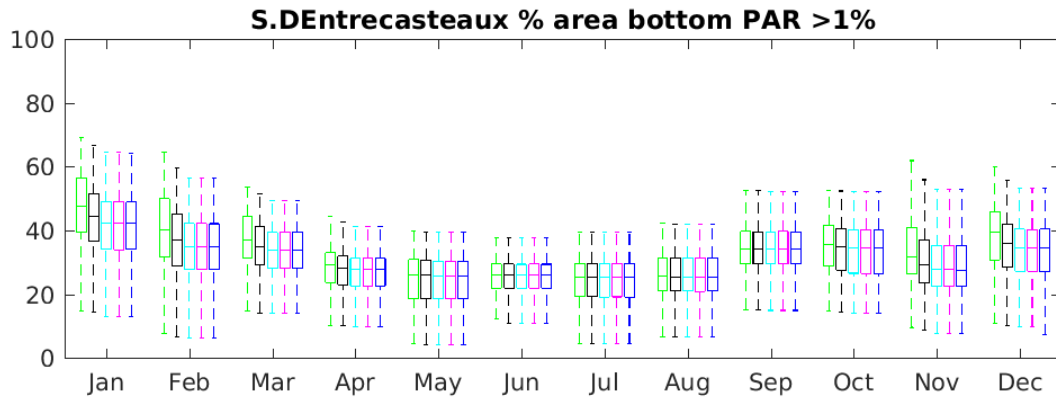
#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



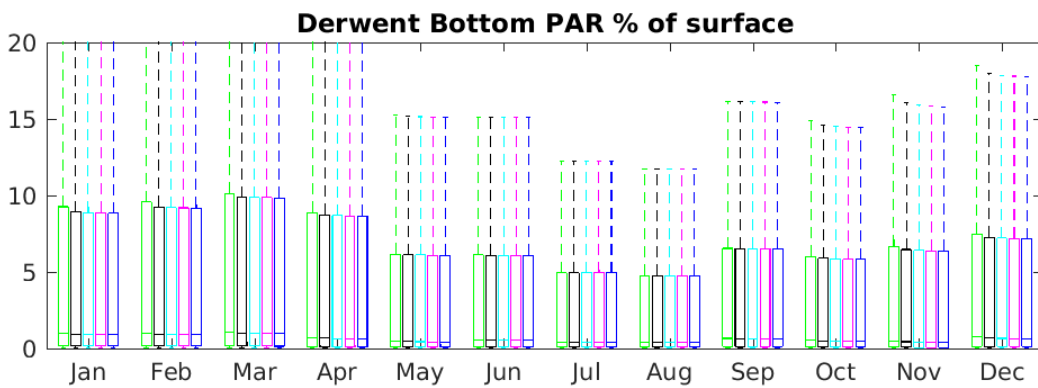
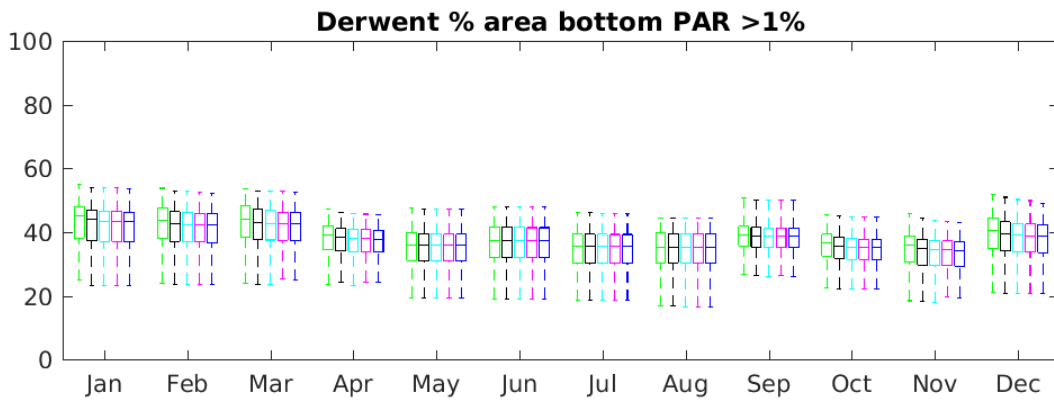
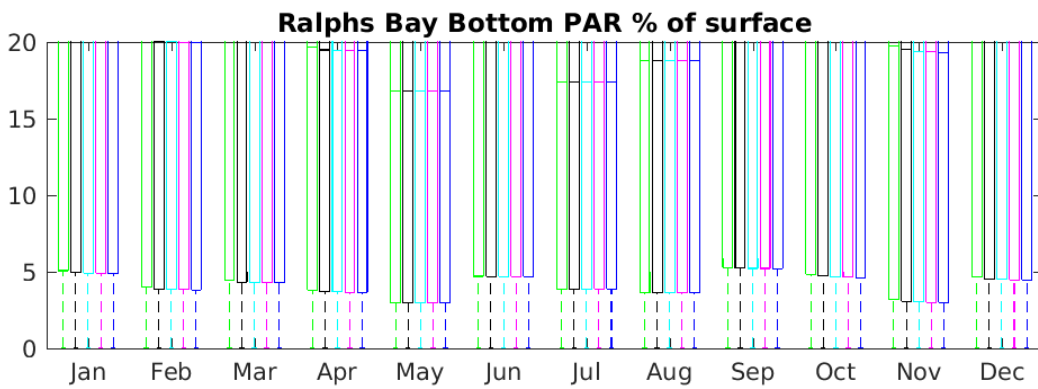
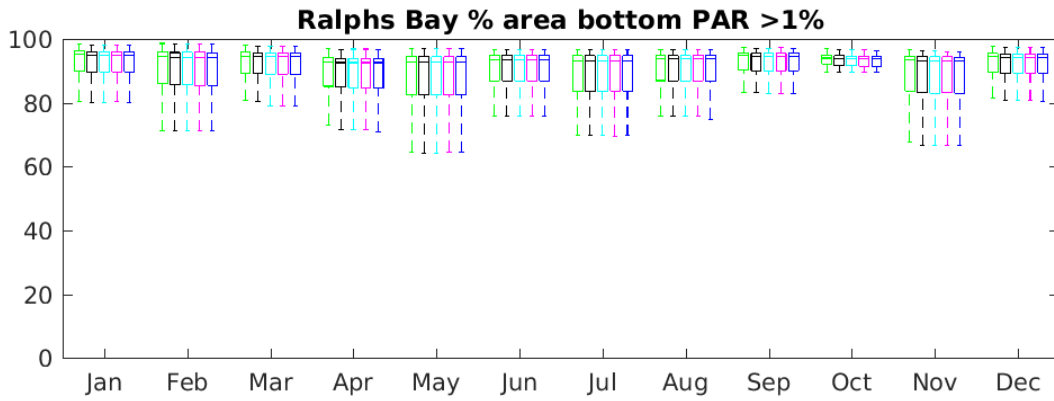
#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



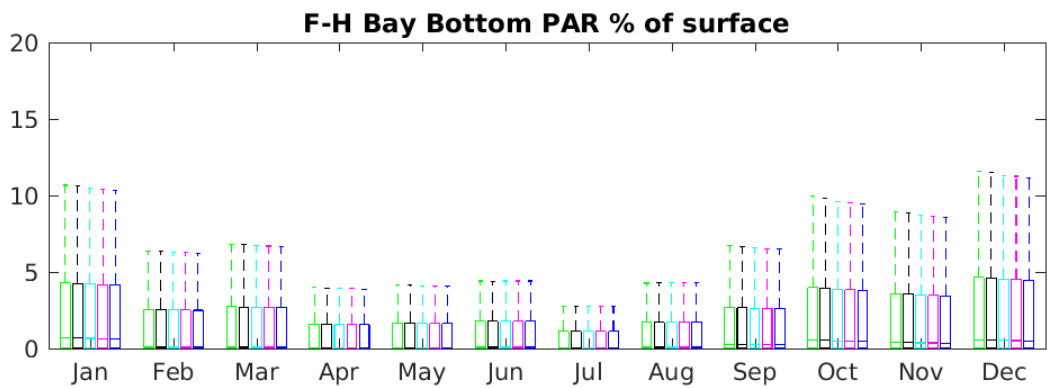
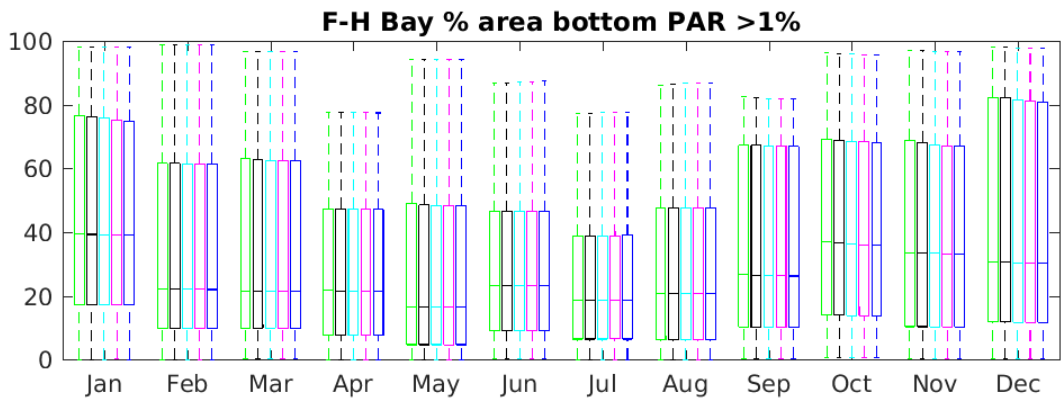
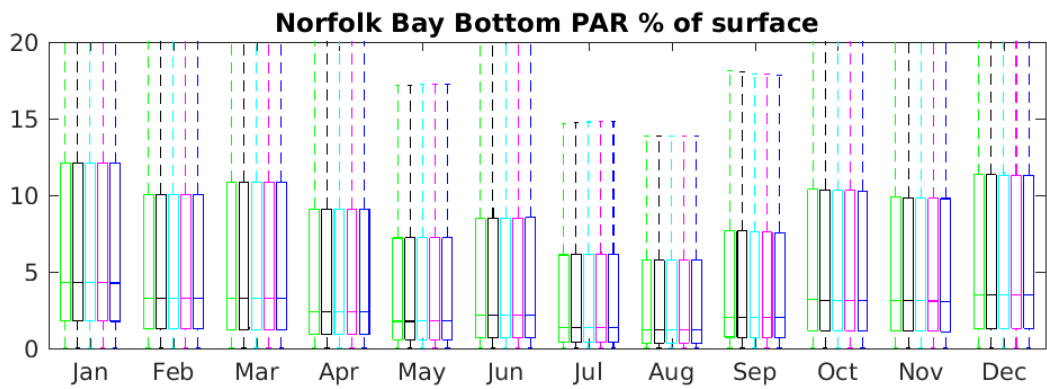
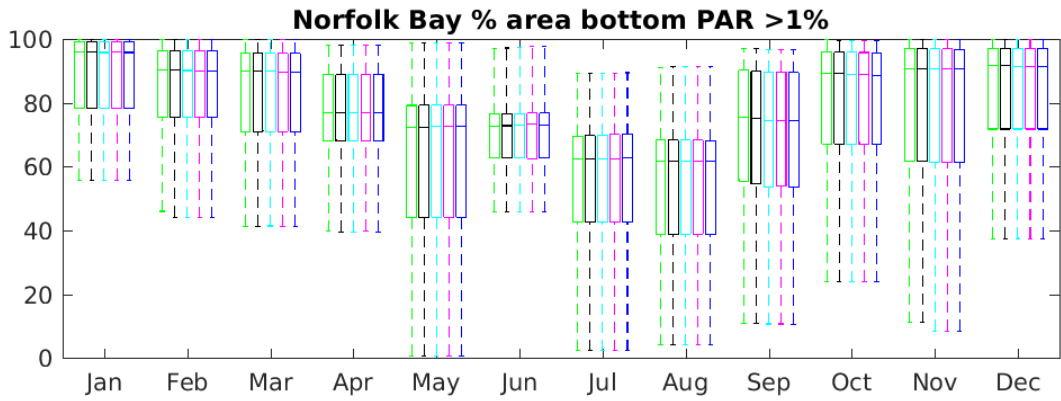
#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



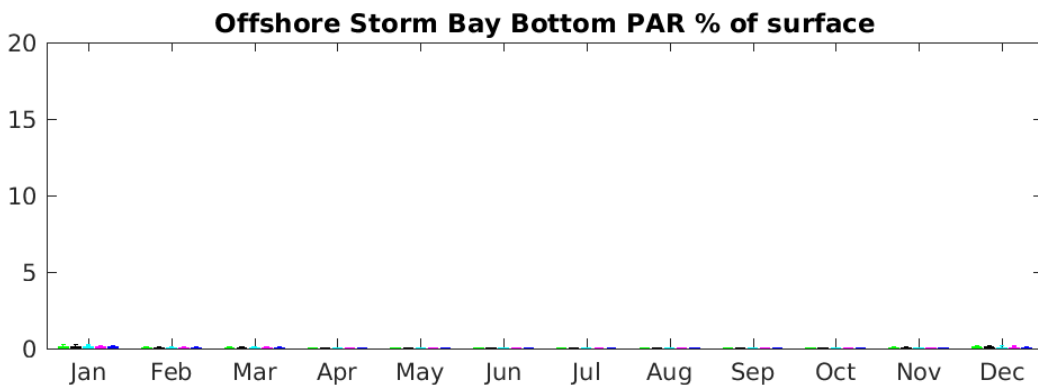
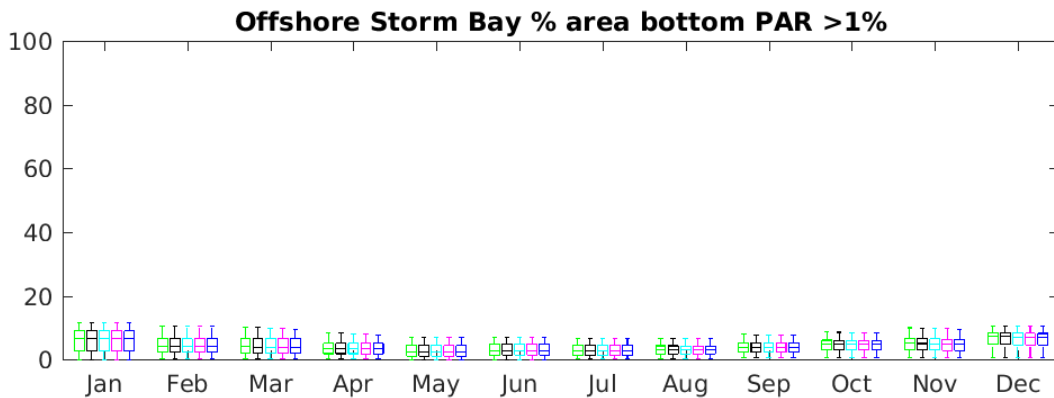
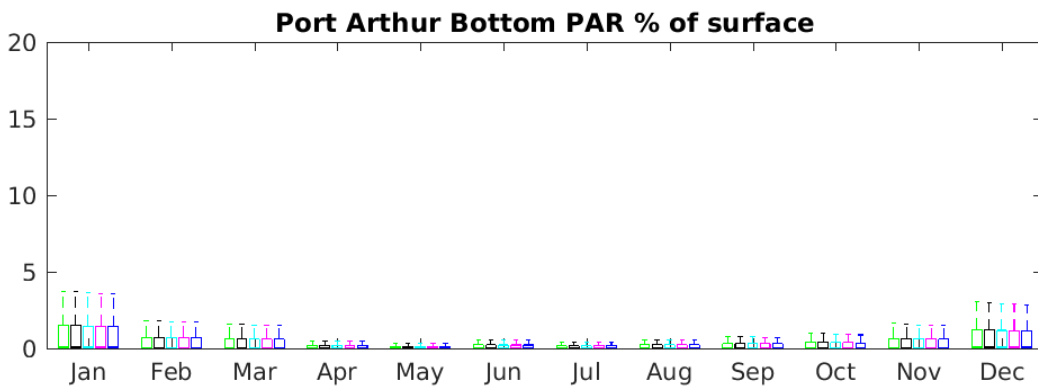
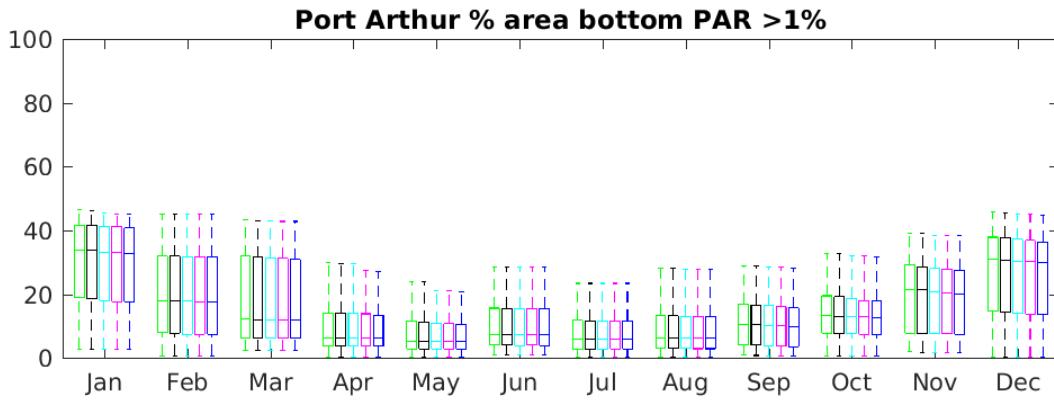
#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

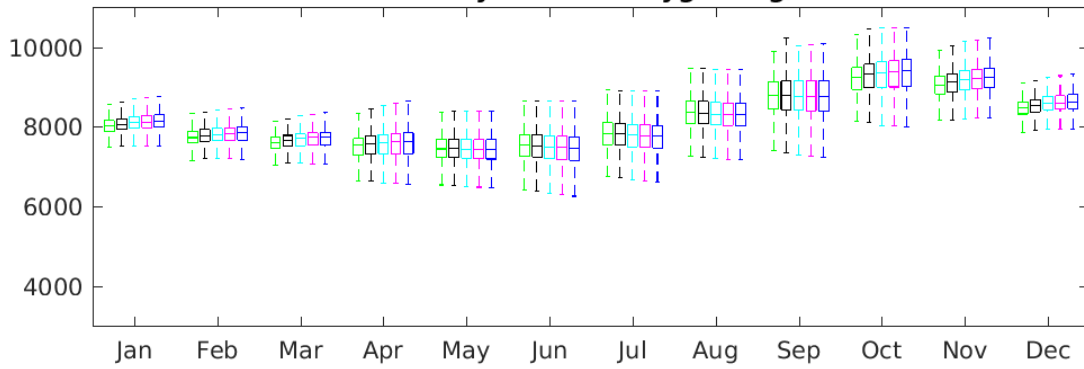


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

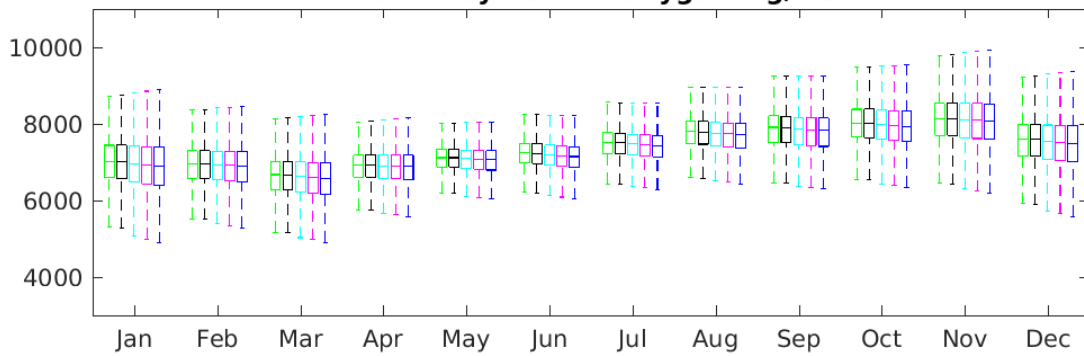


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

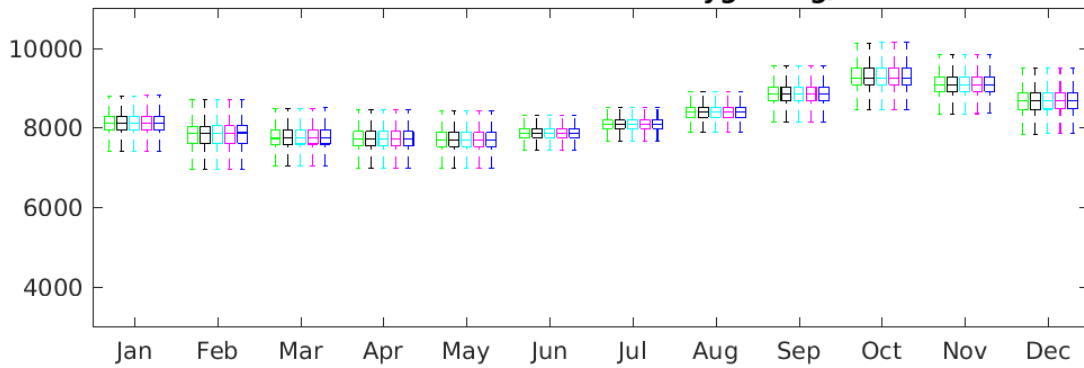
**Storm Bay Surface Oxygen mg/m3**



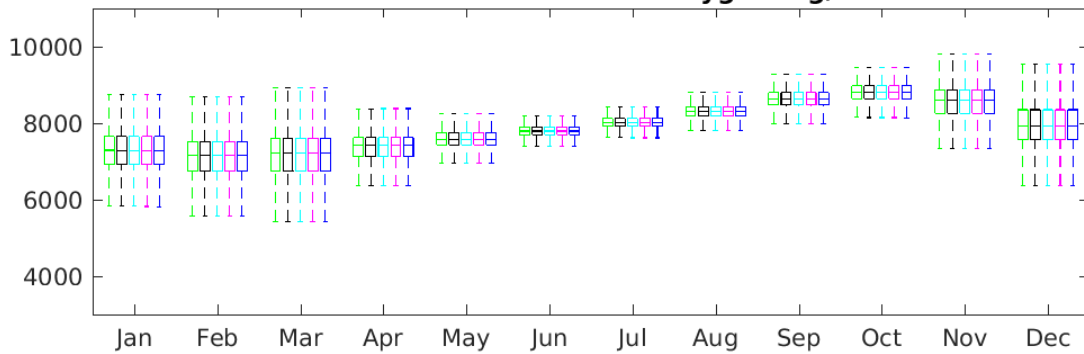
**Storm Bay Bottom Oxygen mg/m3**



**Offshore waters Surface Oxygen mg/m3**



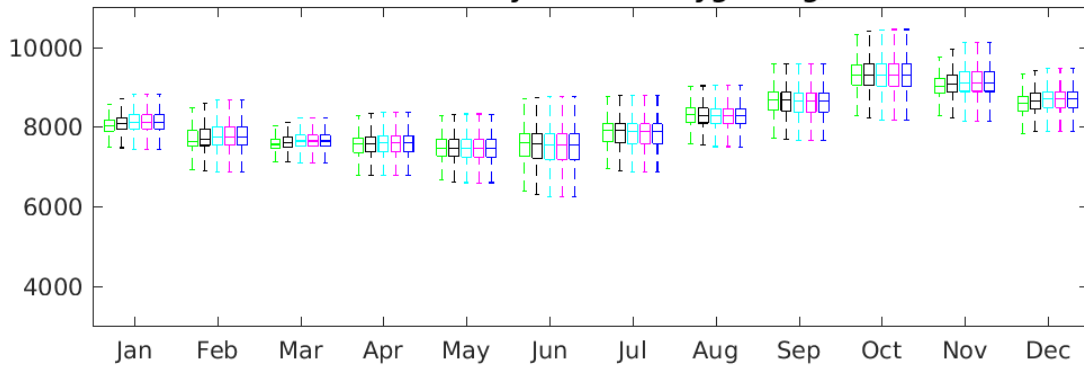
**Offshore waters Bottom Oxygen mg/m3**



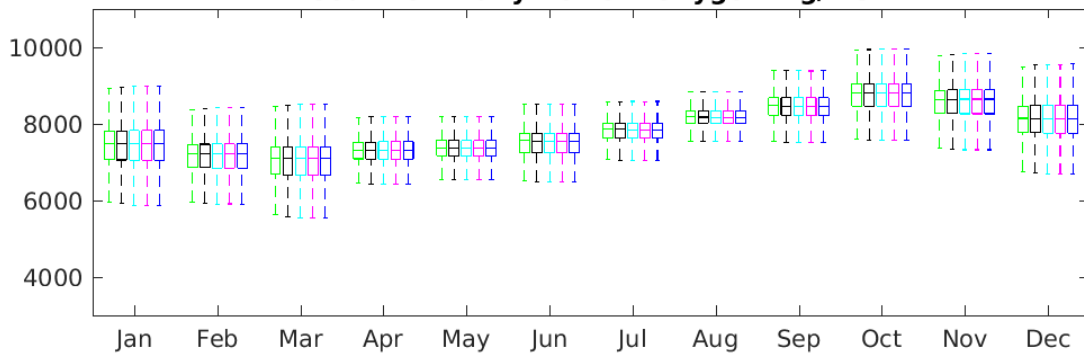
#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



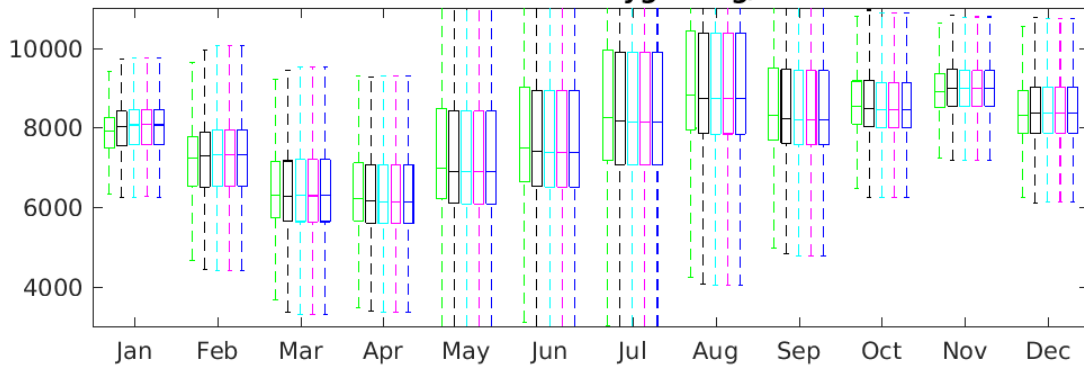
**South of Bruny Surface Oxygen mg/m3**



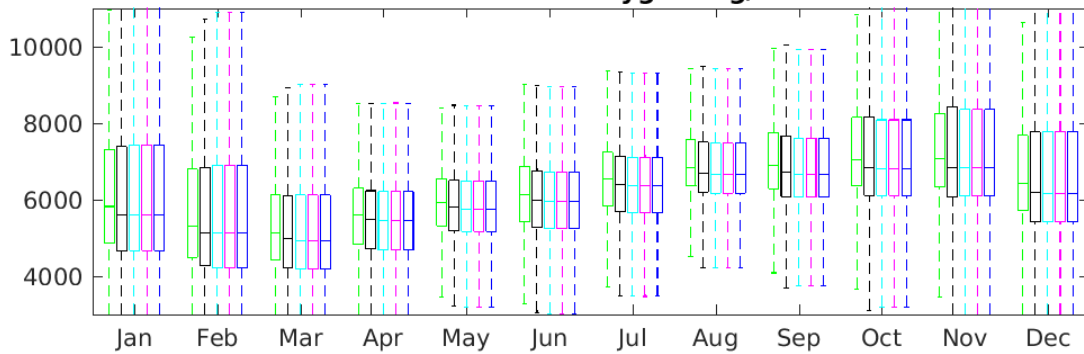
**South of Bruny Bottom Oxygen mg/m3**



**Huon Surface Oxygen mg/m3**

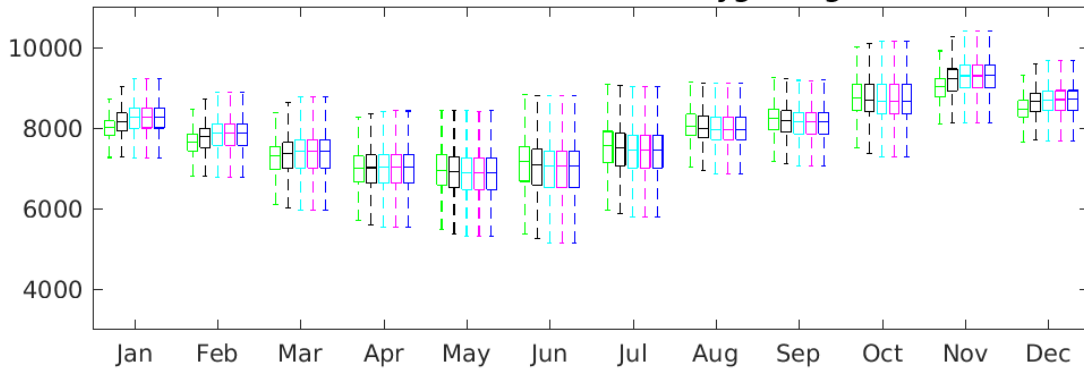


**Huon Bottom Oxygen mg/m3**

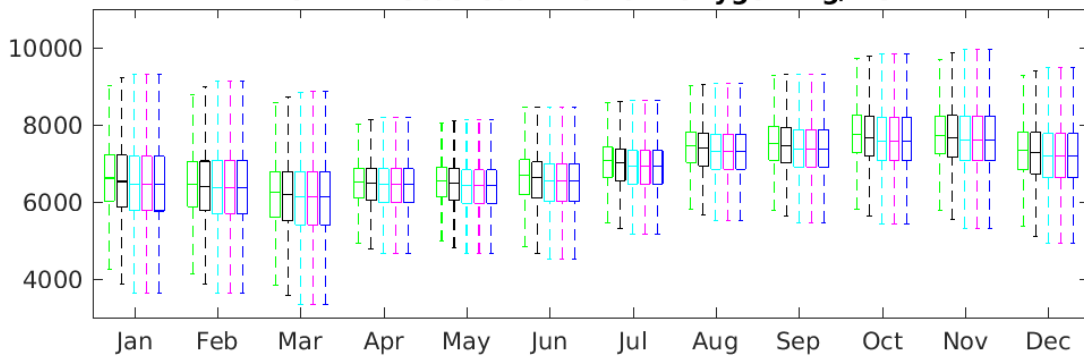


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

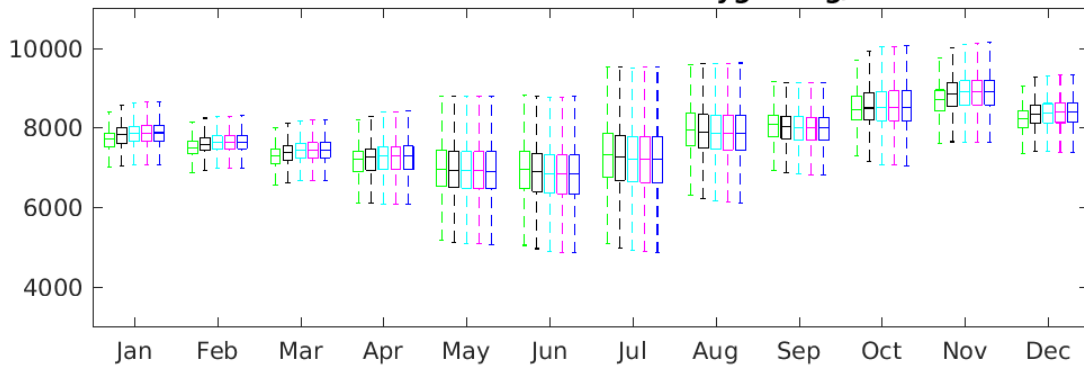
**S.D'Entrecasteaux Surface Oxygen mg/m3**



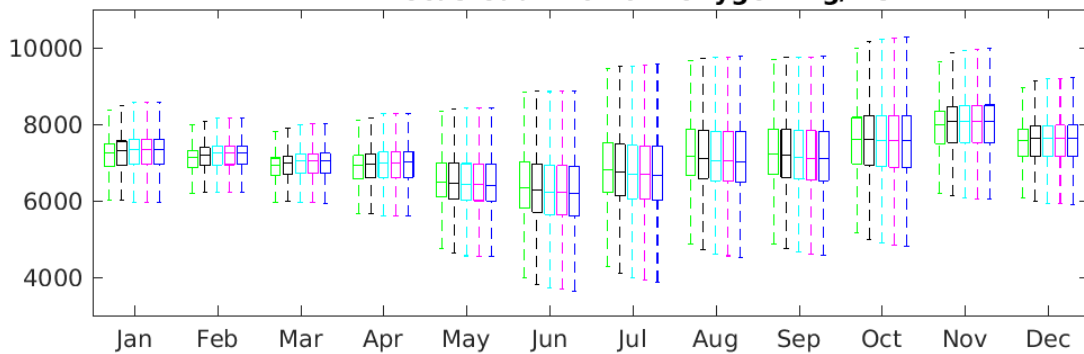
**S.D'Entrecasteaux Bottom Oxygen mg/m3**



**N.D'Entrecasteaux Surface Oxygen mg/m3**

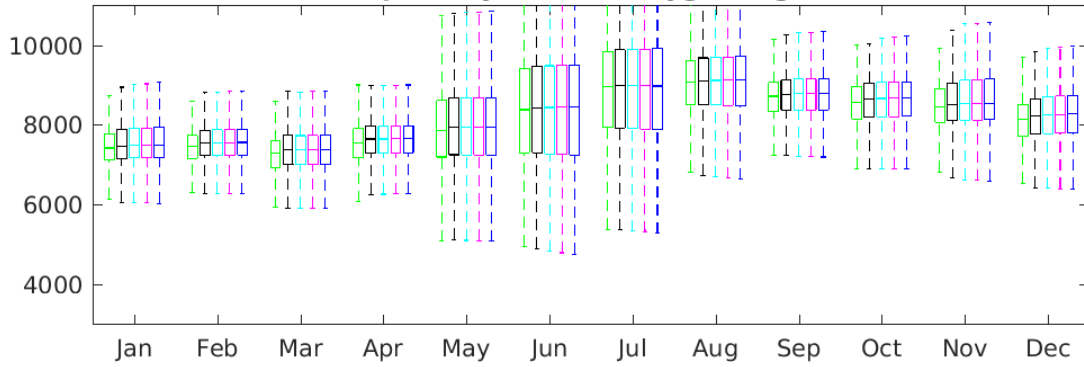


**N.D'Entrecasteaux Bottom Oxygen mg/m3**

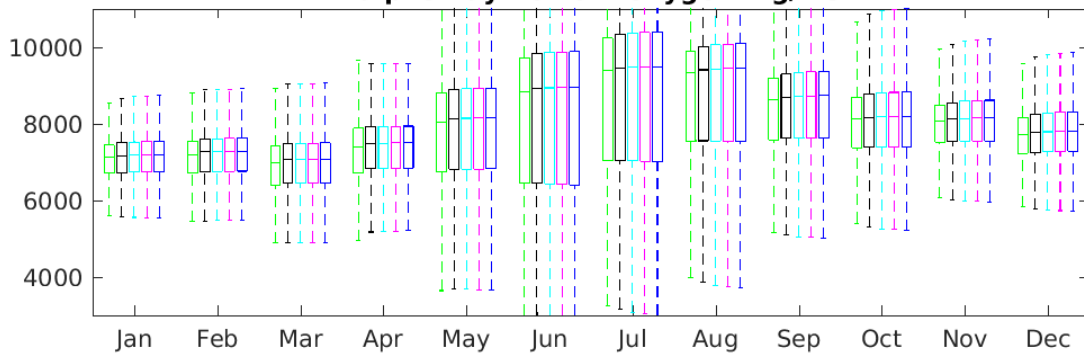


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #5 2020+3ktN in SB #5 2020+4.5ktN in SB

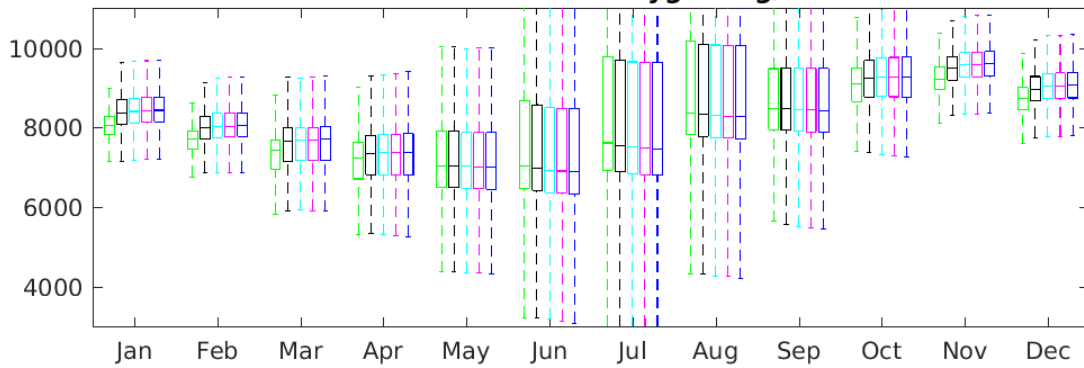
**Ralphps Bay Surface Oxygen mg/m3**



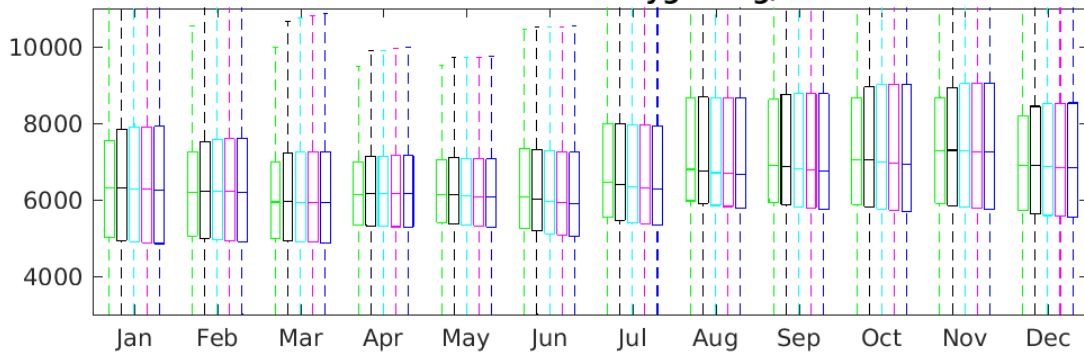
**Ralphps Bay Bottom Oxygen mg/m3**



**Derwent Surface Oxygen mg/m3**

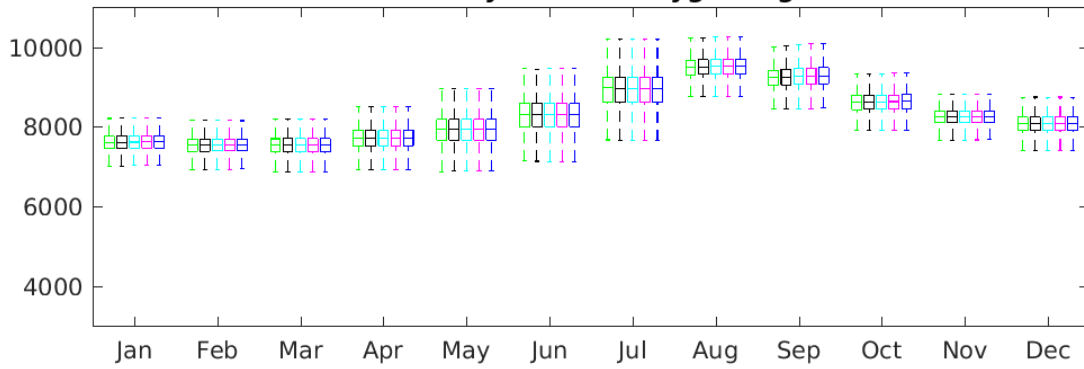


**Derwent Bottom Oxygen mg/m3**

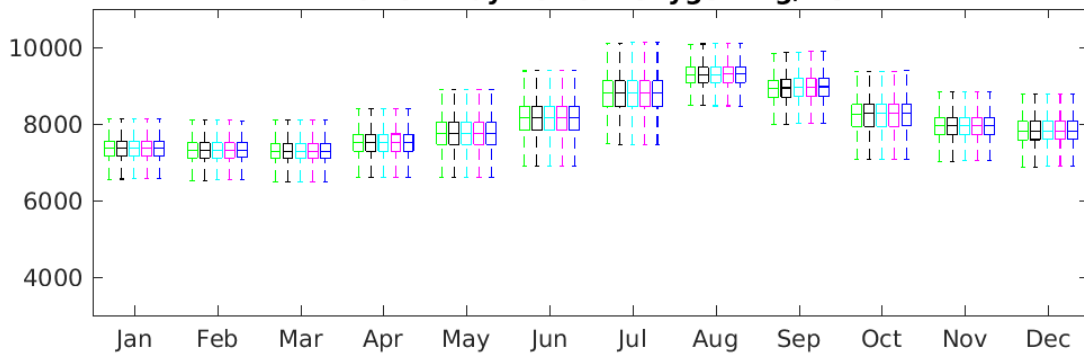


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

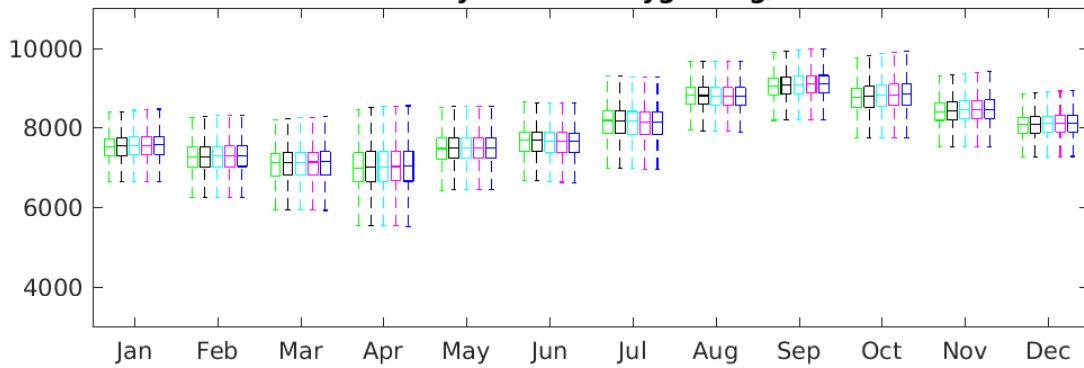
**Norfolk Bay Surface Oxygen mg/m3**



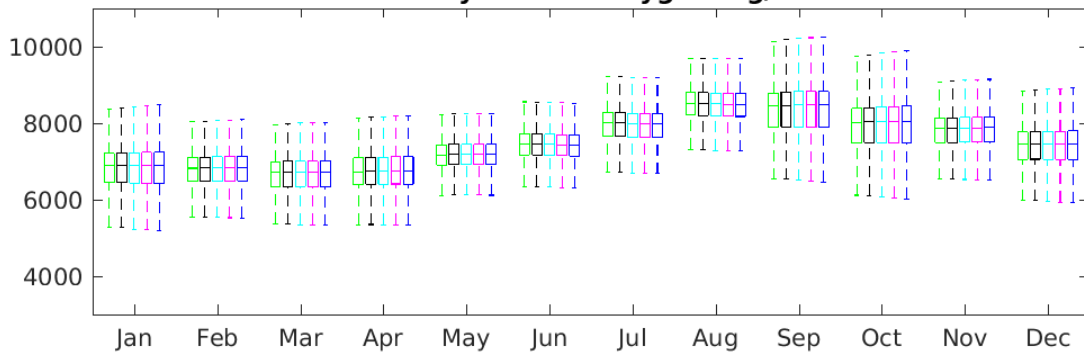
**Norfolk Bay Bottom Oxygen mg/m3**



**F-H Bay Surface Oxygen mg/m3**

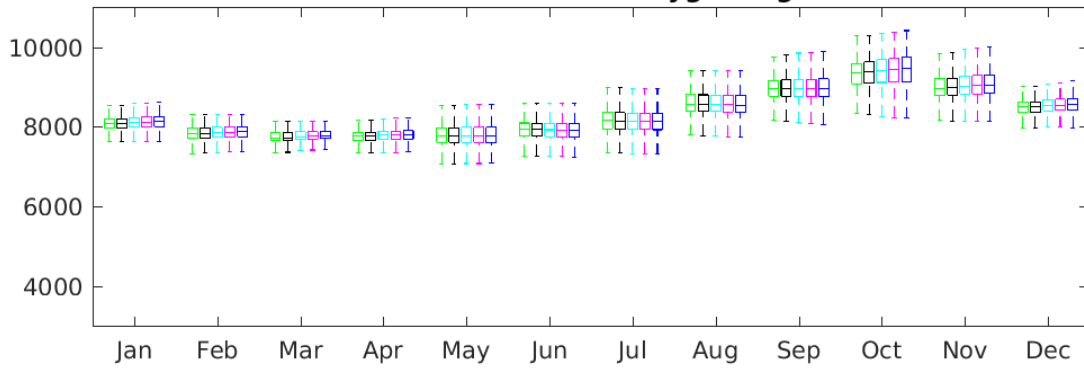


**F-H Bay Bottom Oxygen mg/m3**

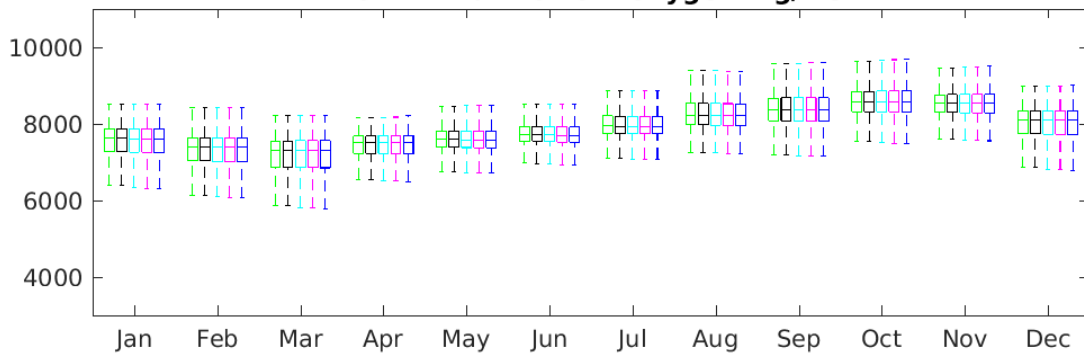


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

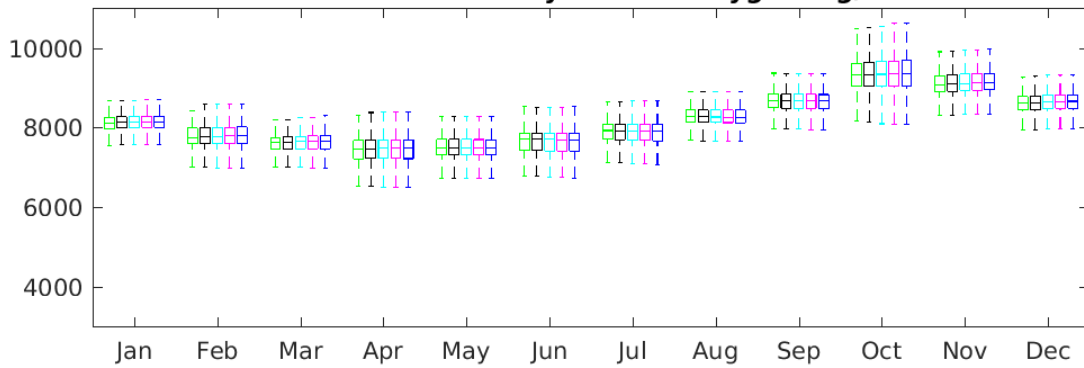
**Port Arthur Surface Oxygen mg/m3**



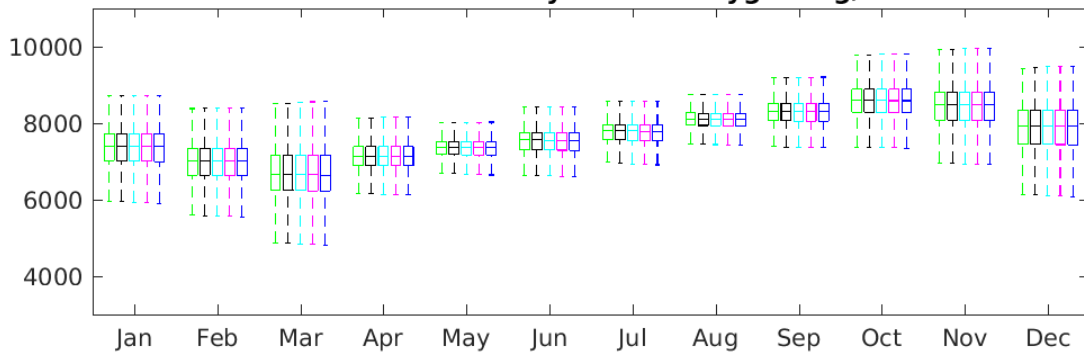
**Port Arthur Bottom Oxygen mg/m3**



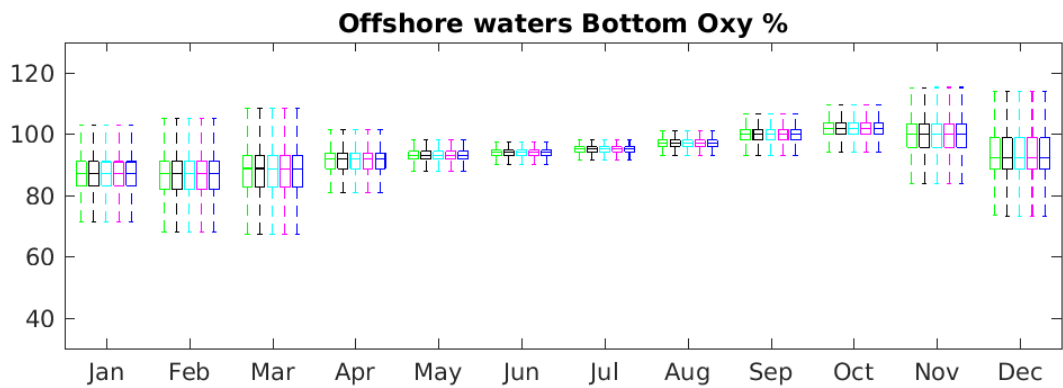
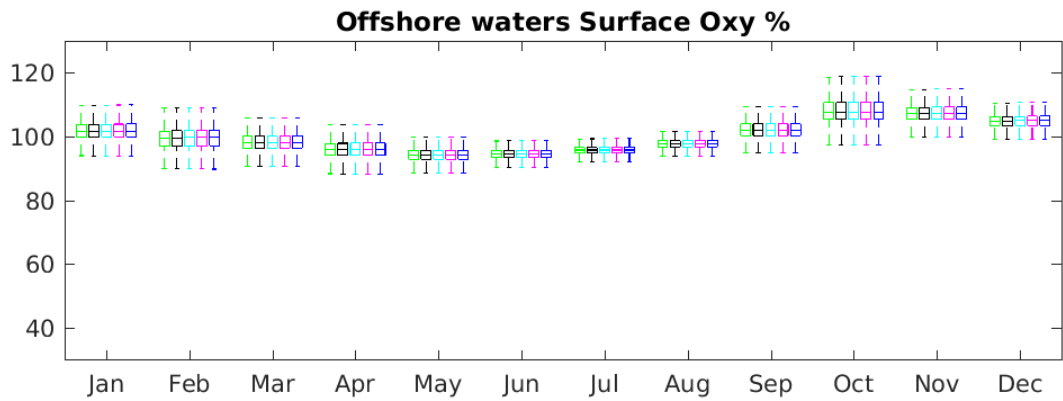
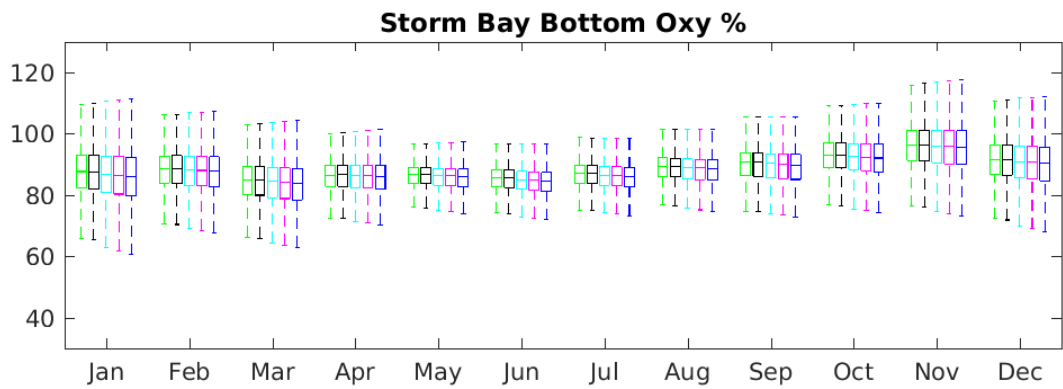
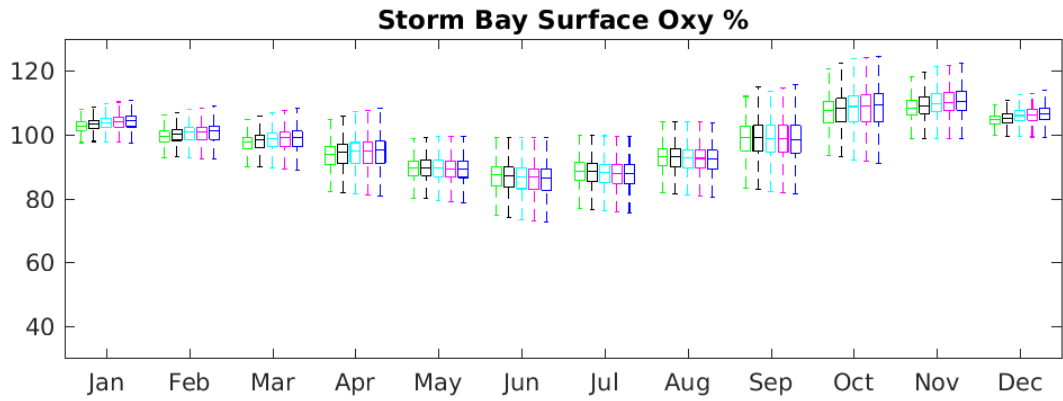
**Offshore Storm Bay Surface Oxygen mg/m3**



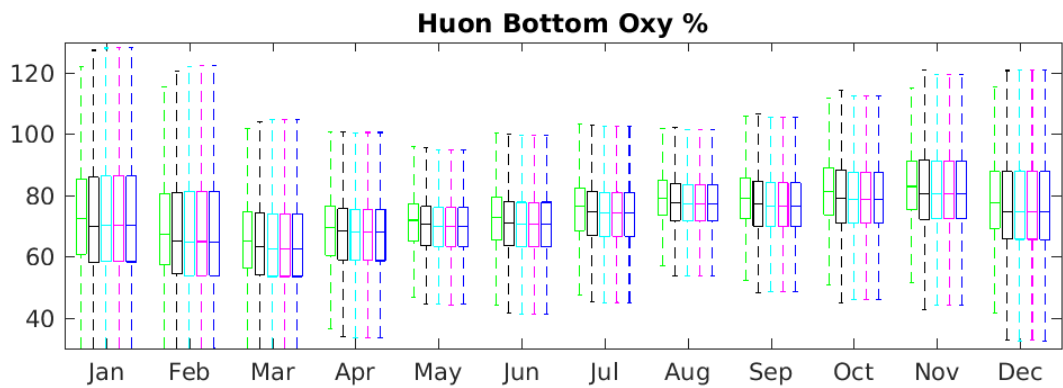
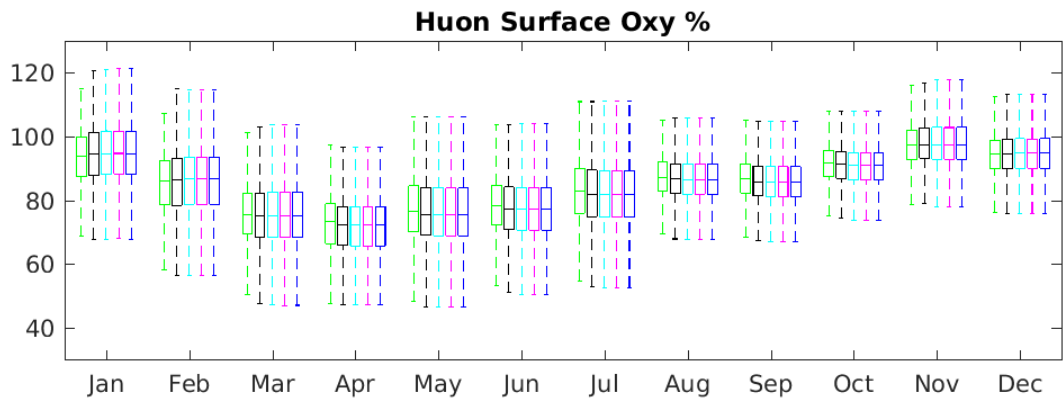
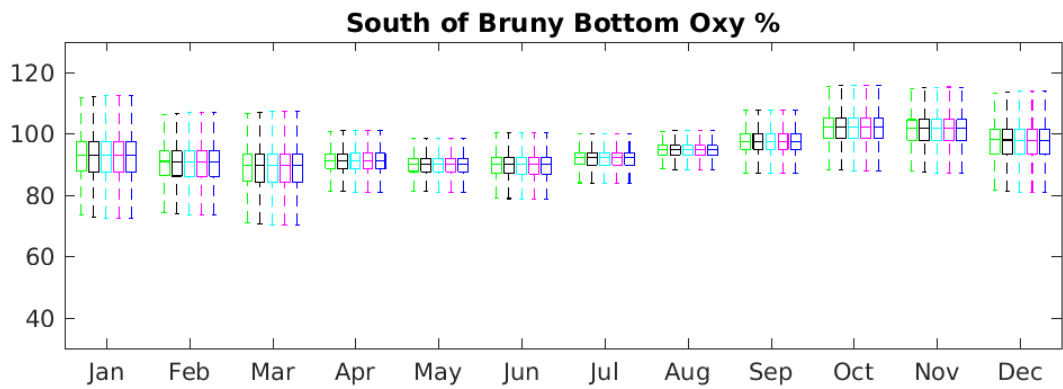
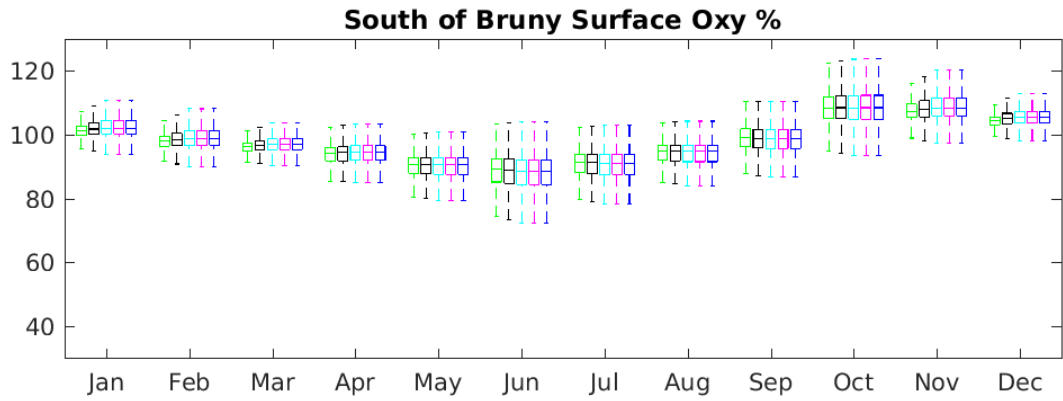
**Offshore Storm Bay Bottom Oxygen mg/m3**



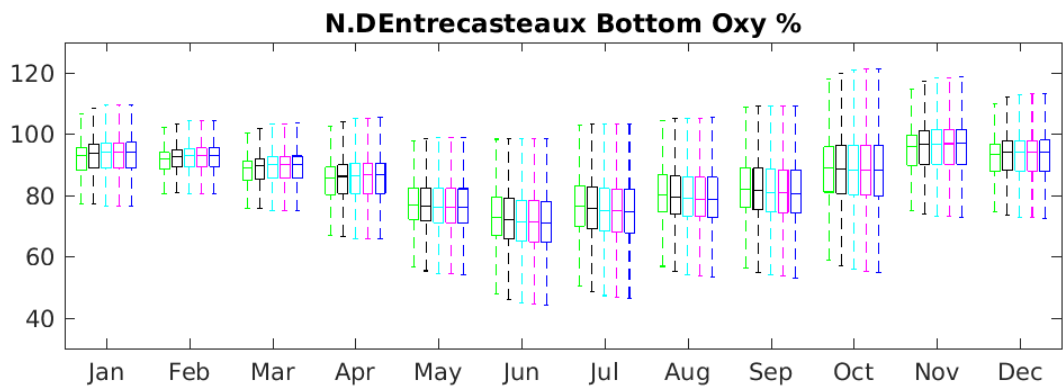
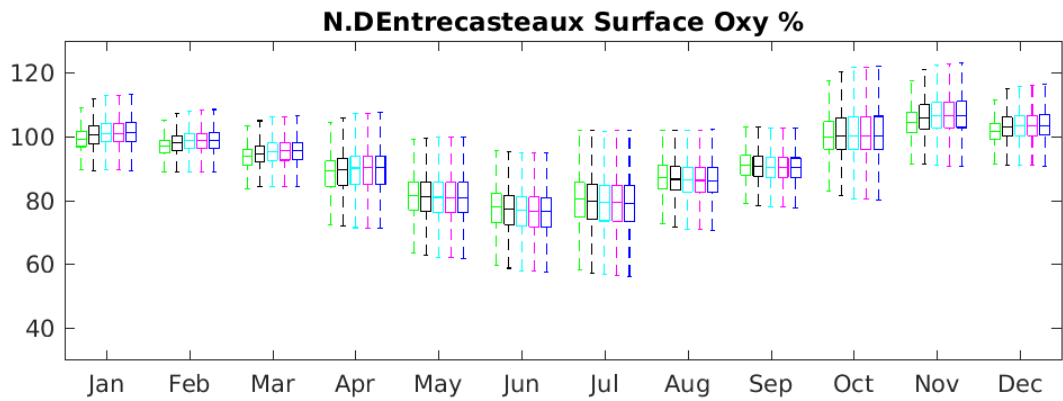
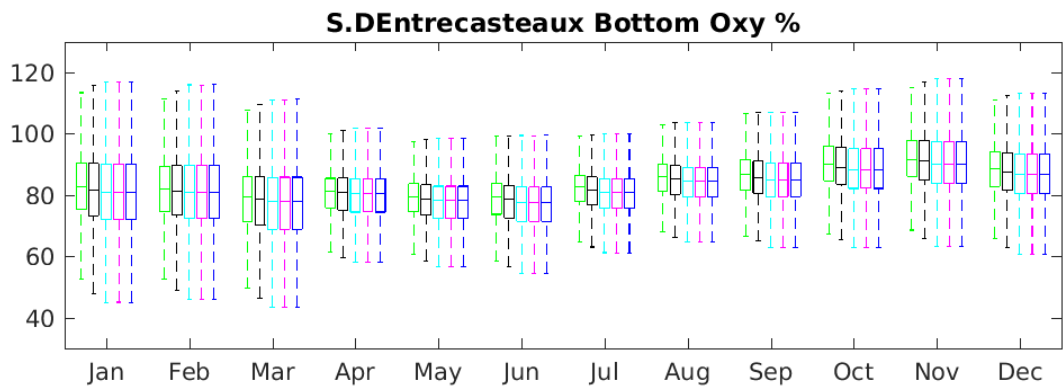
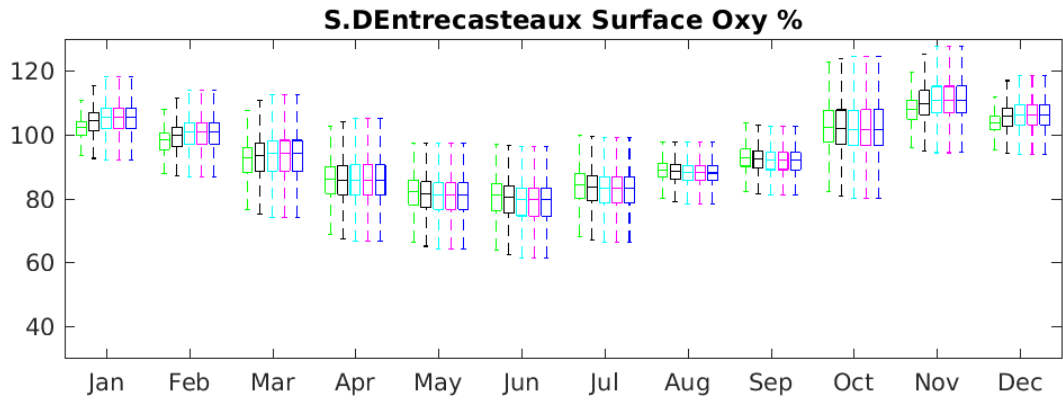
#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

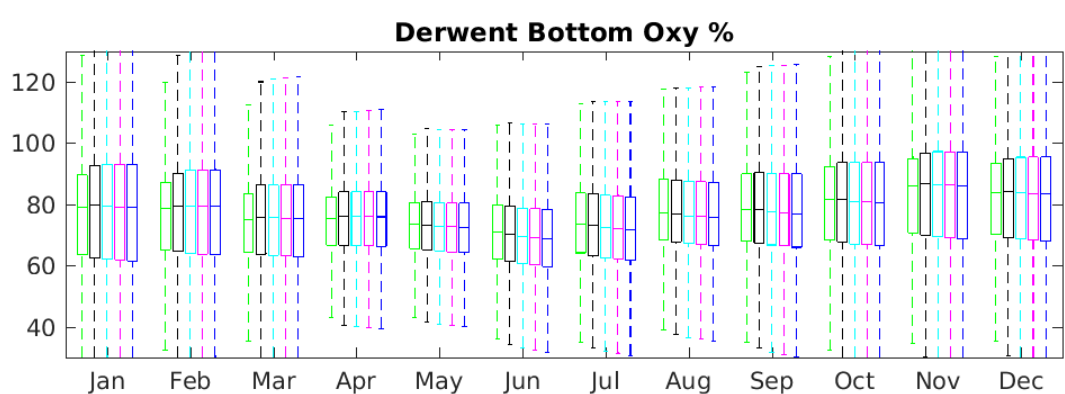
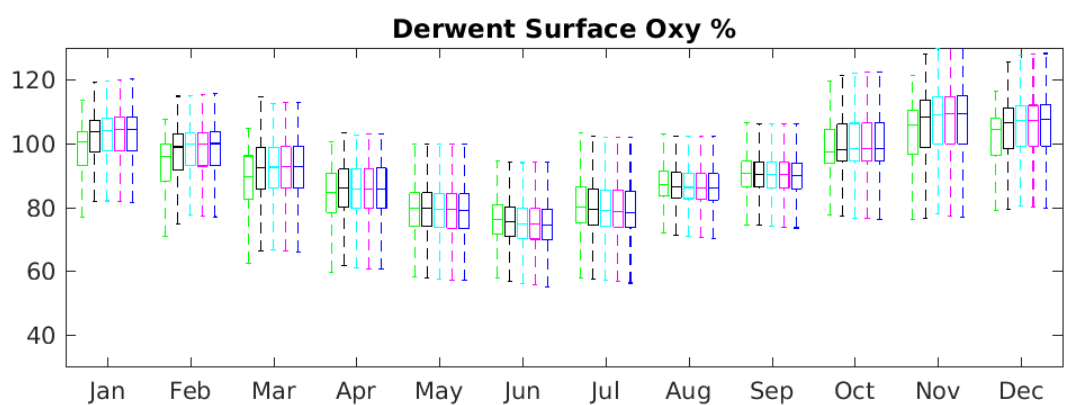
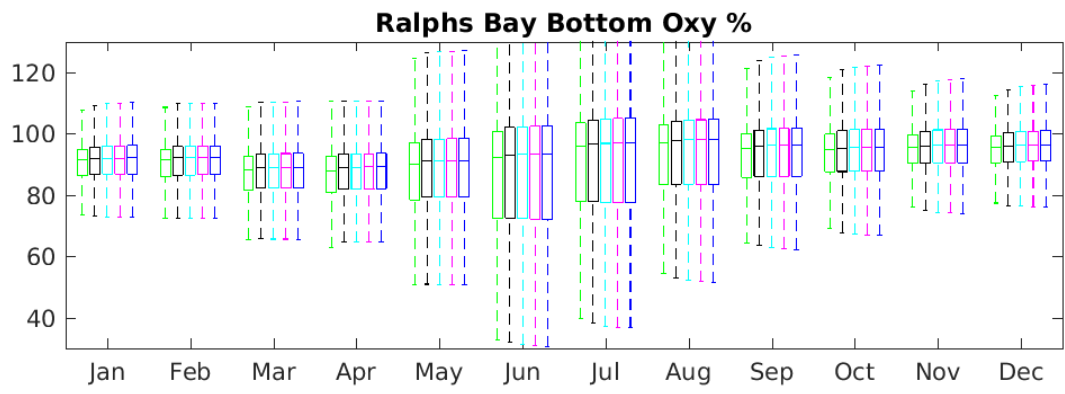
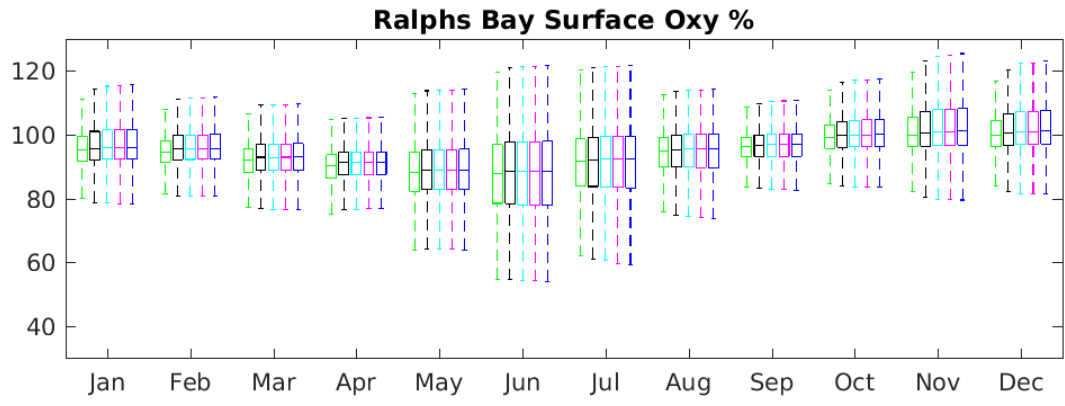


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



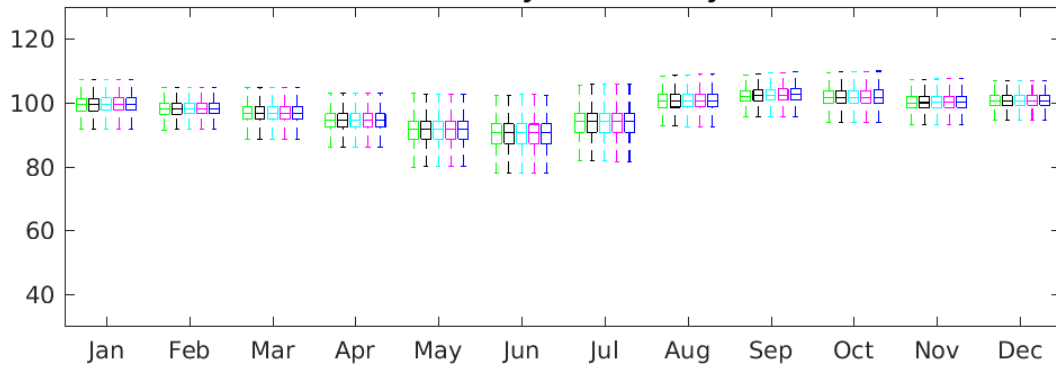
#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



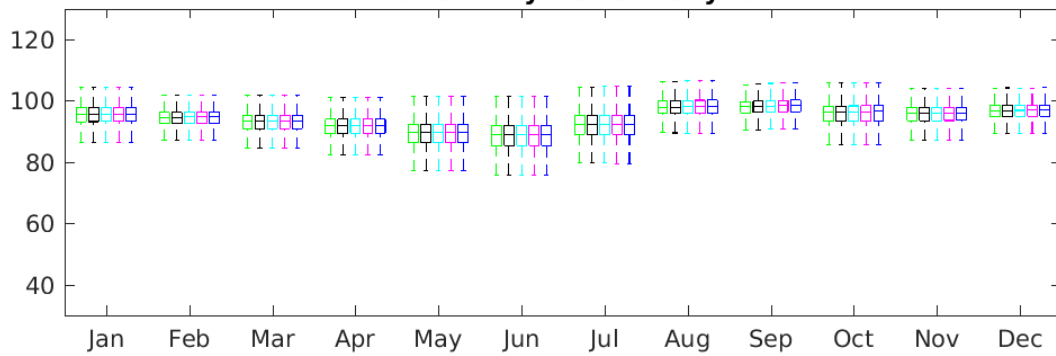


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

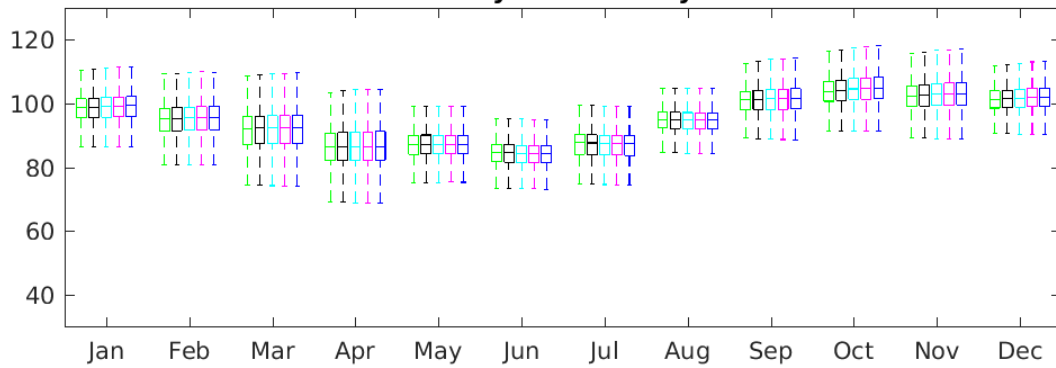
**Norfolk Bay Surface Oxy %**



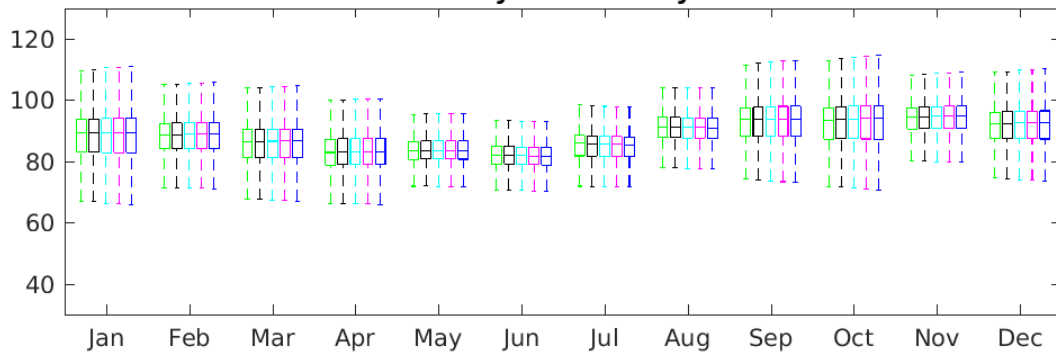
**Norfolk Bay Bottom Oxy %**



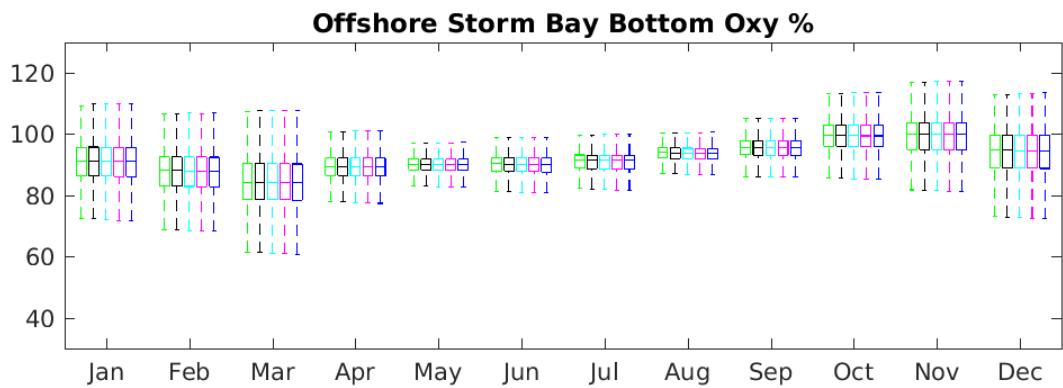
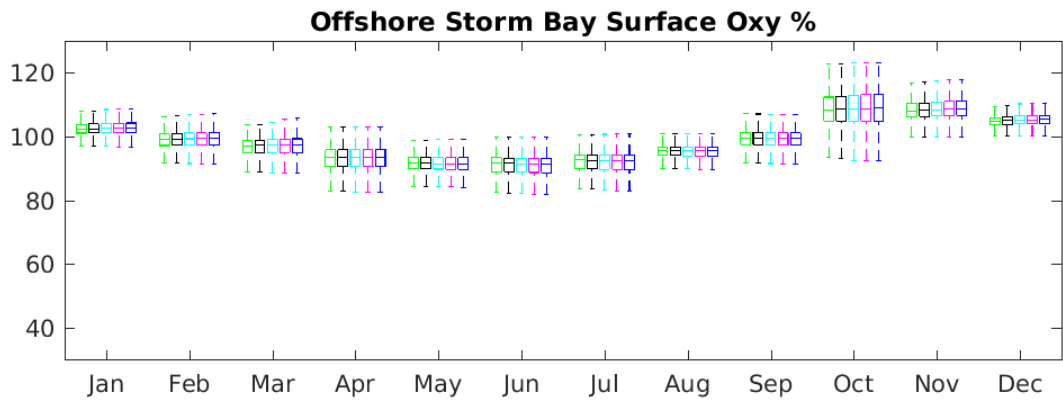
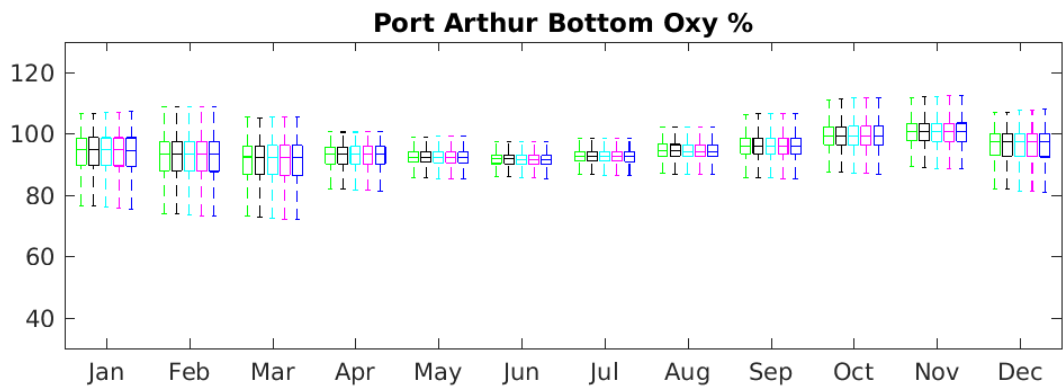
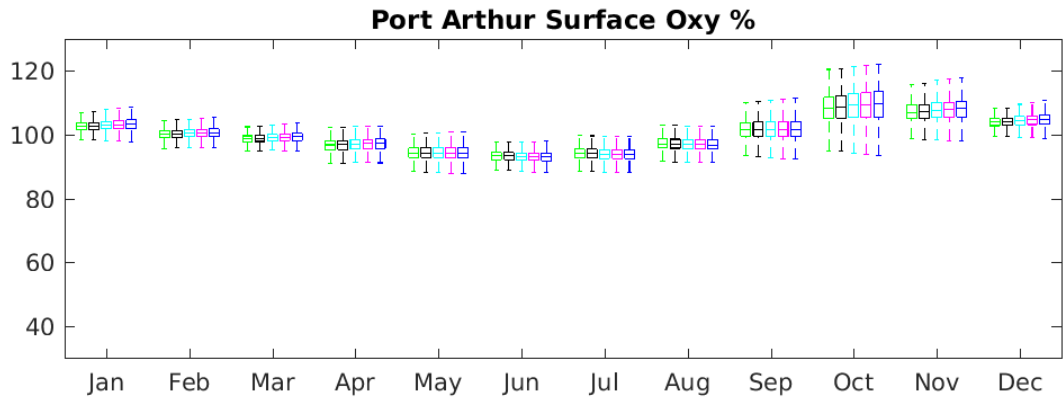
**F-H Bay Surface Oxy %**



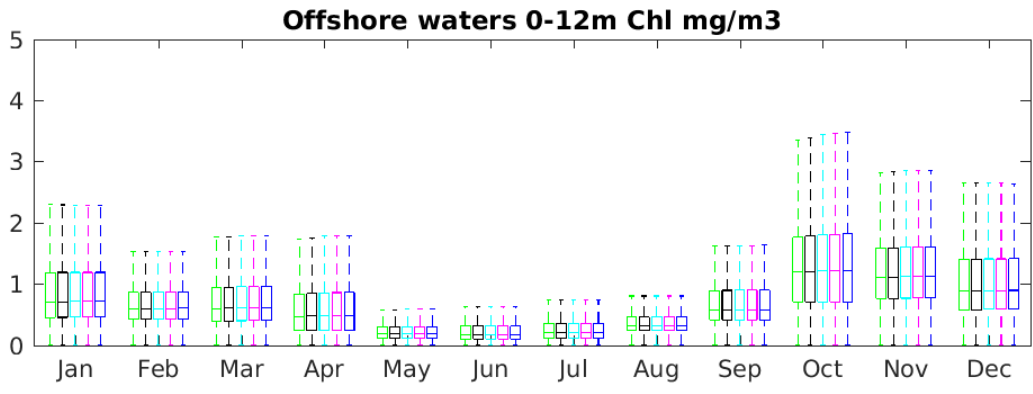
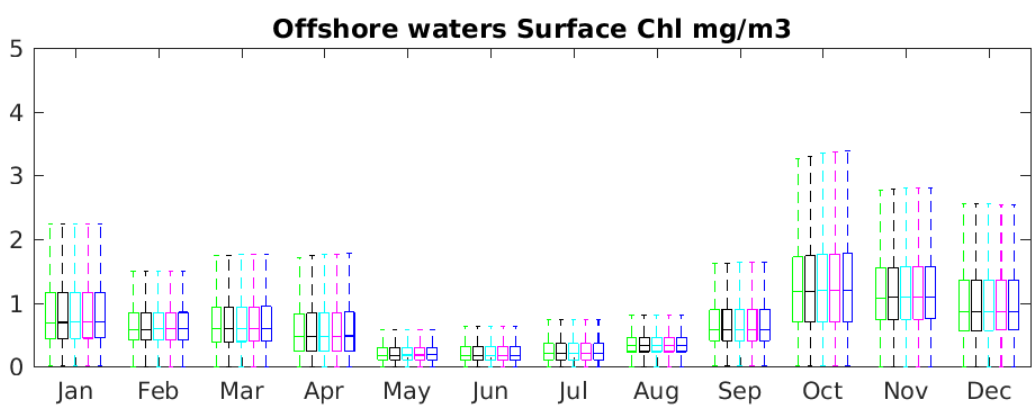
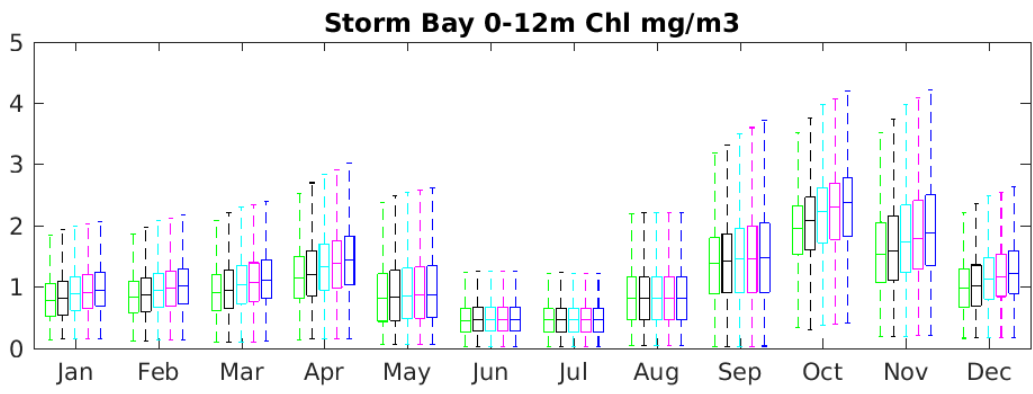
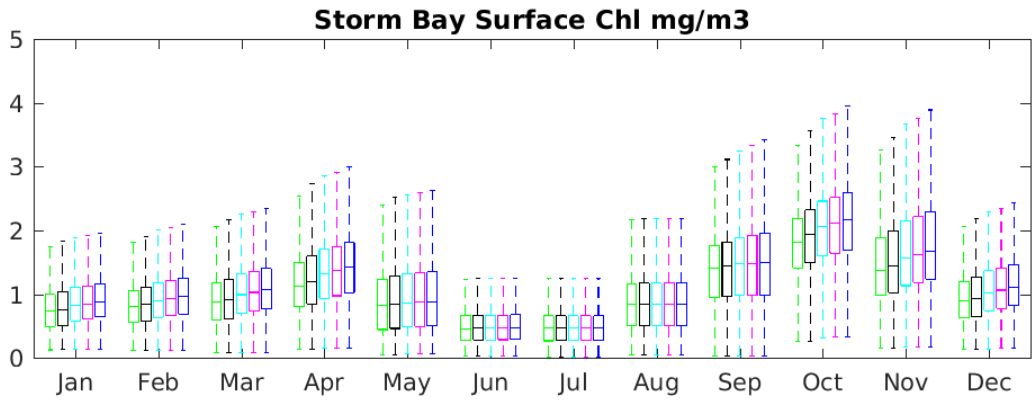
**F-H Bay Bottom Oxy %**



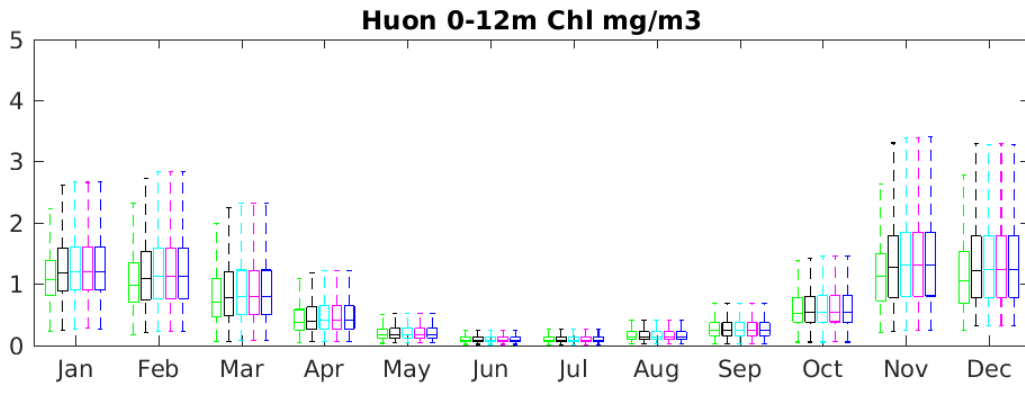
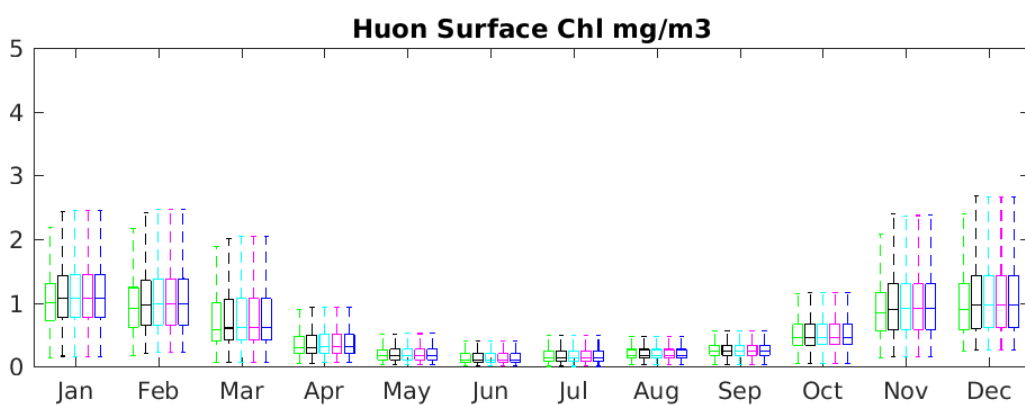
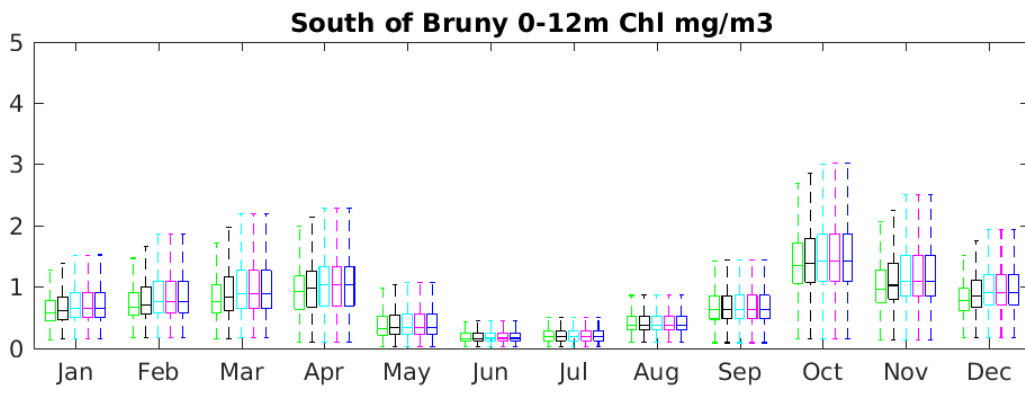
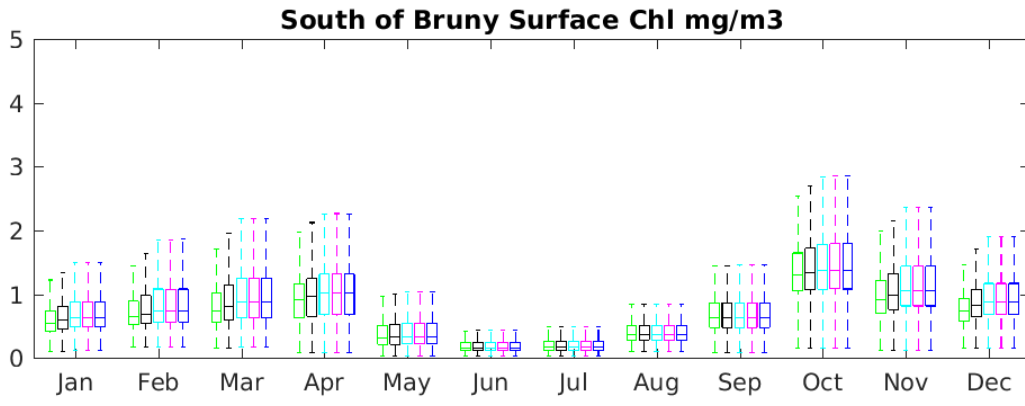
#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



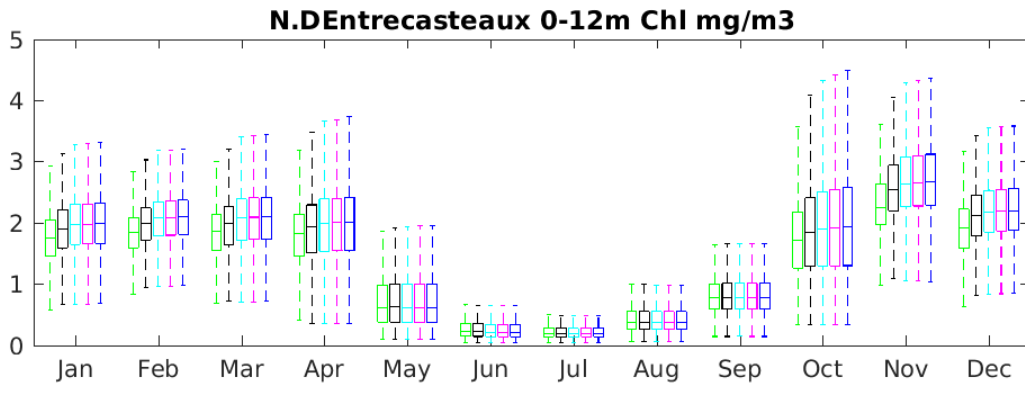
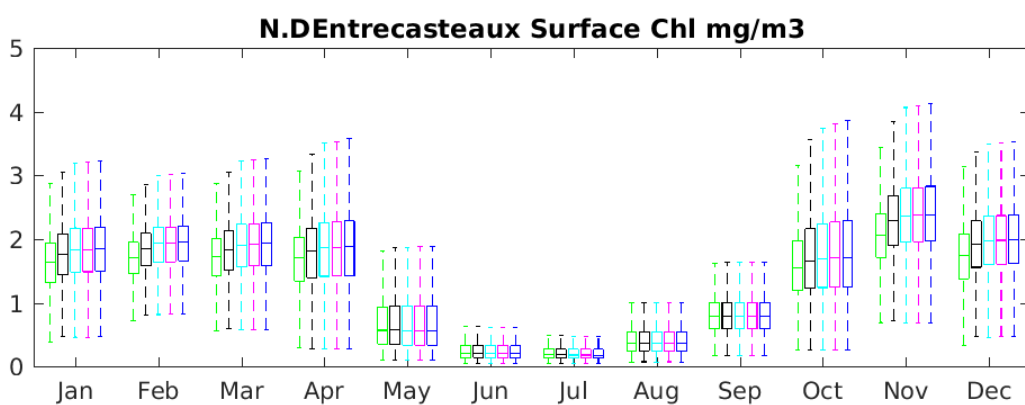
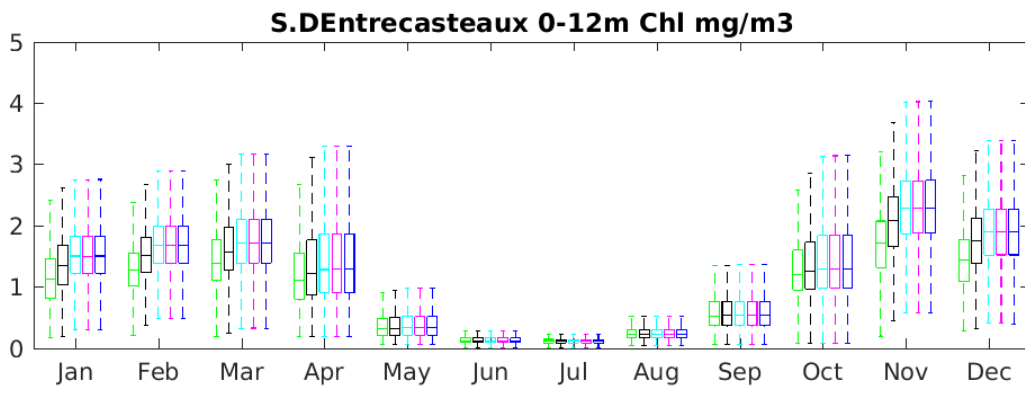
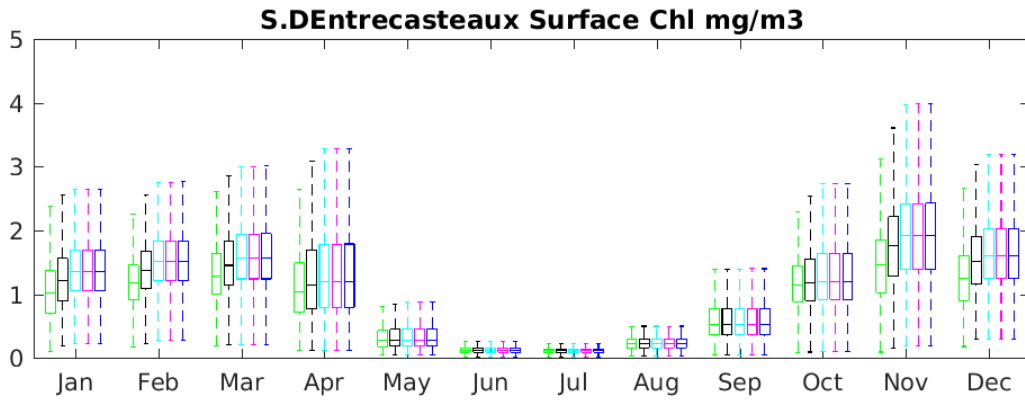
#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



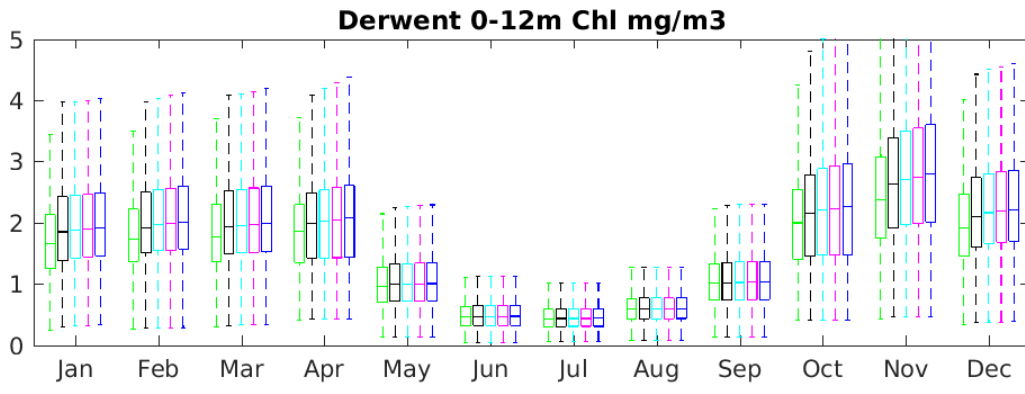
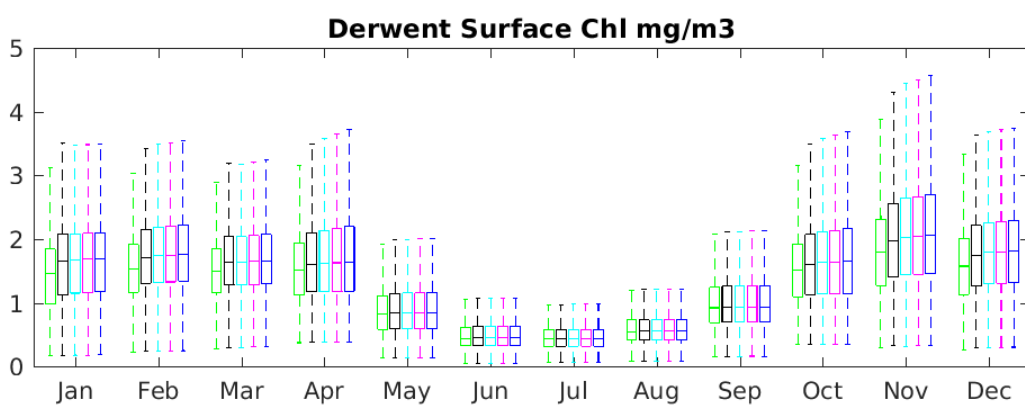
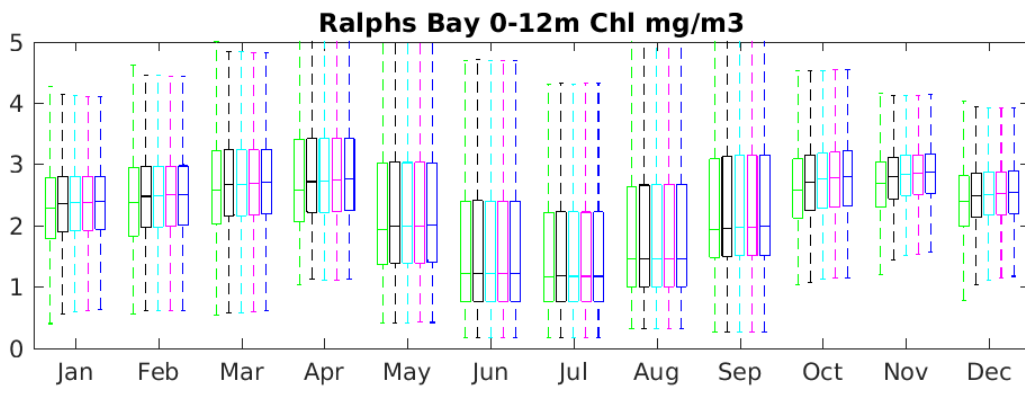
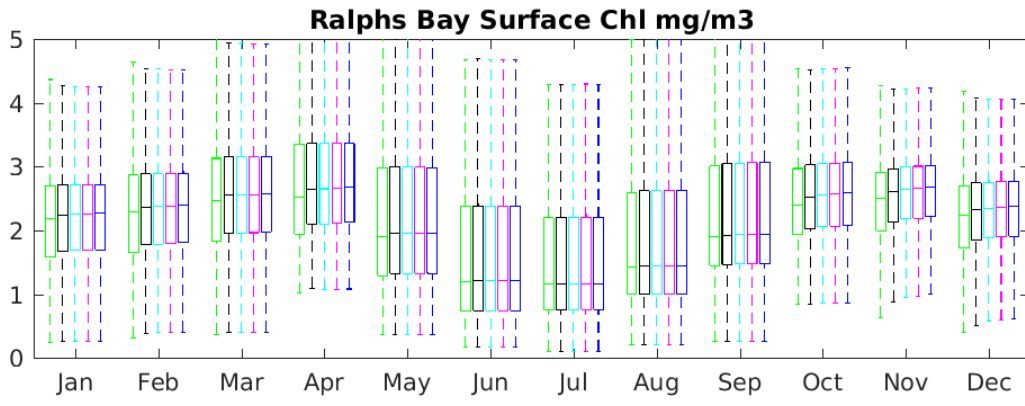
#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



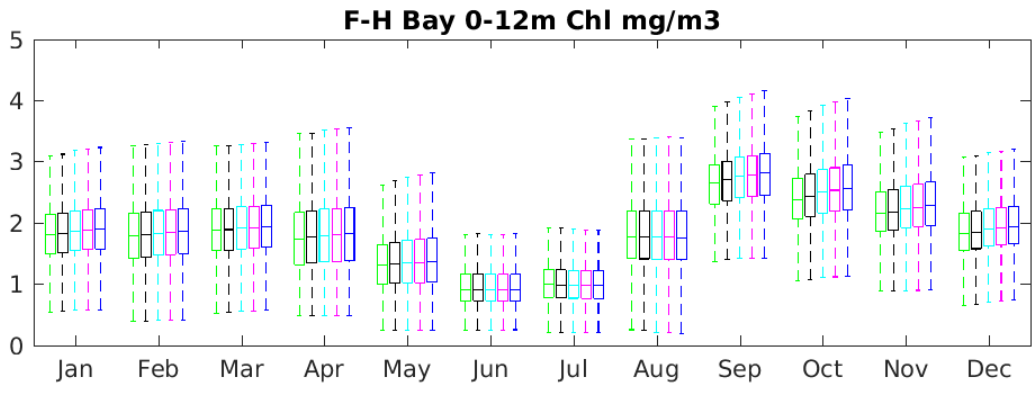
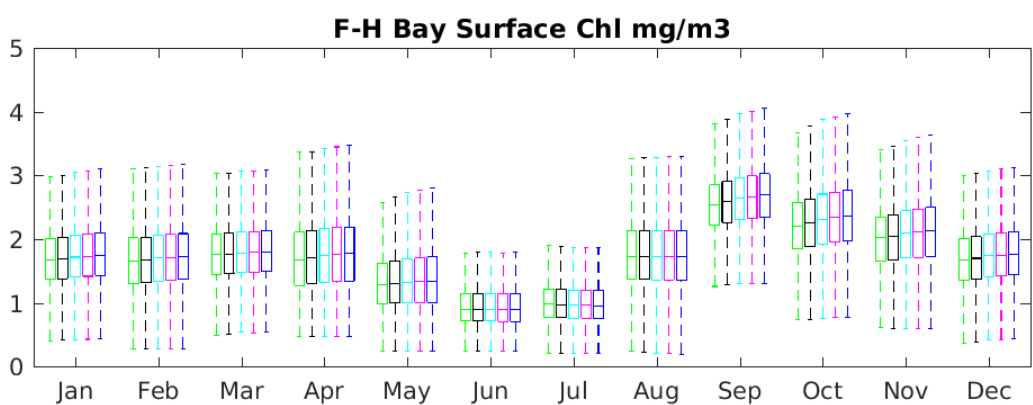
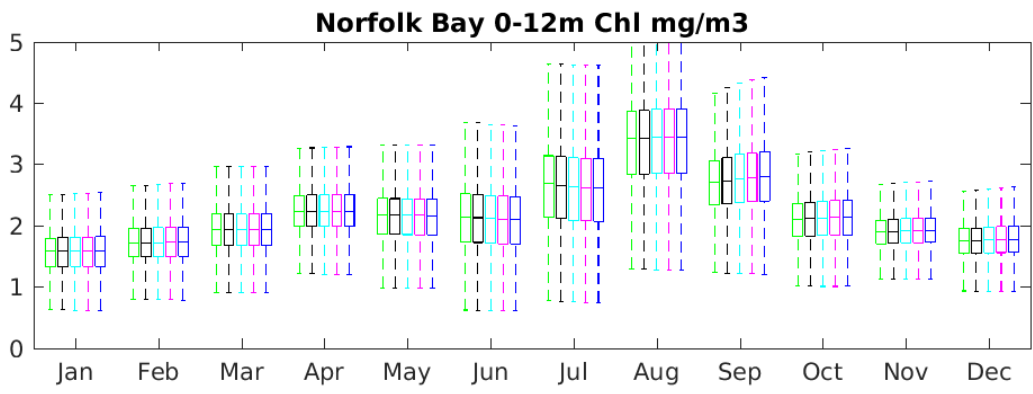
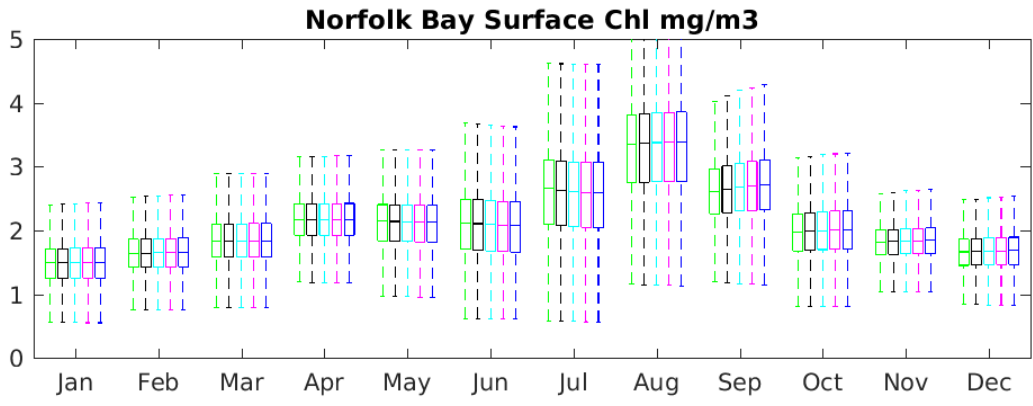
#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

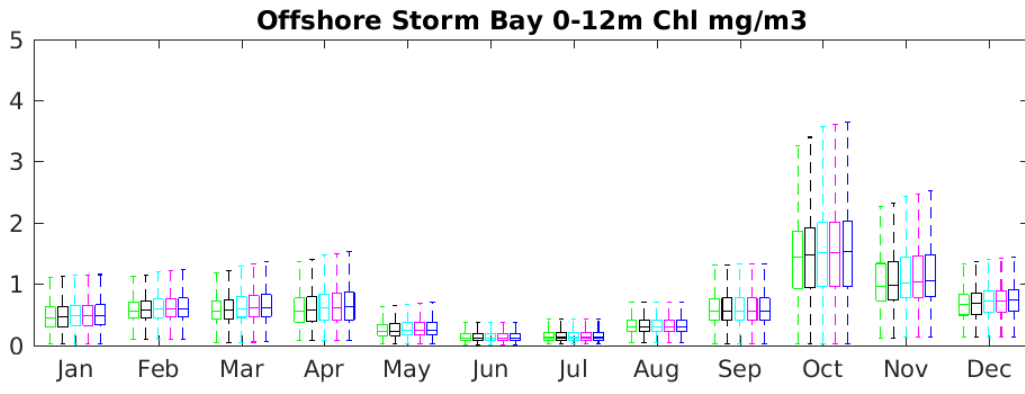
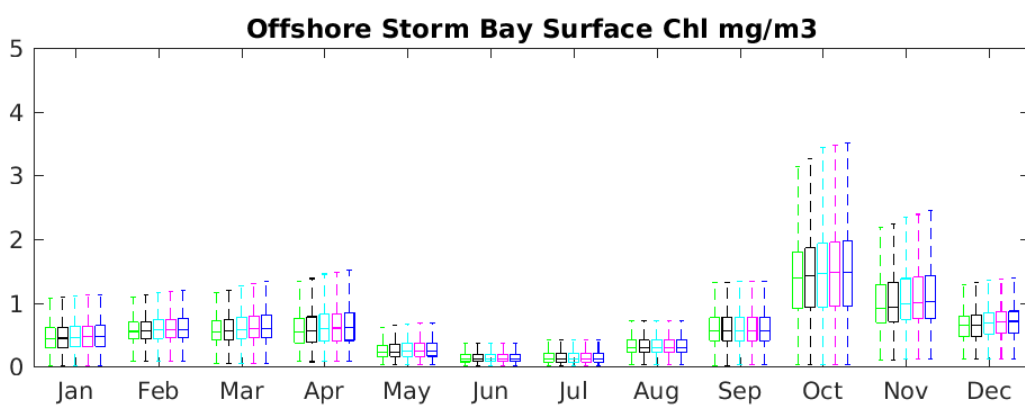
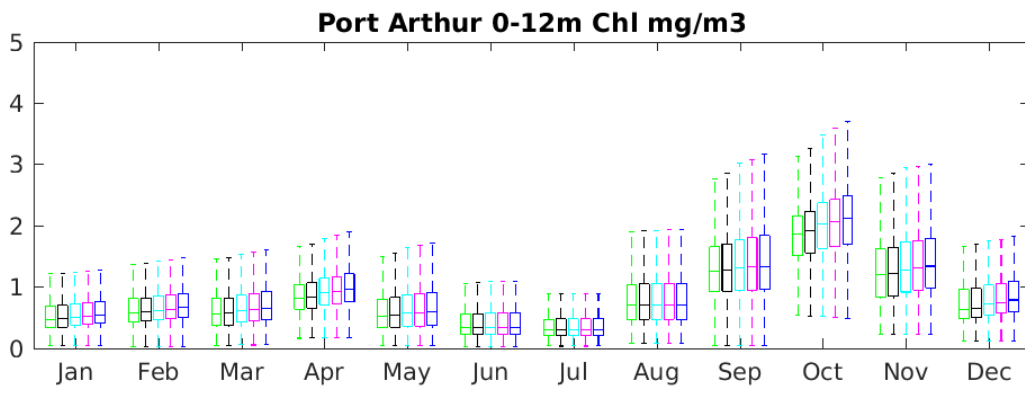
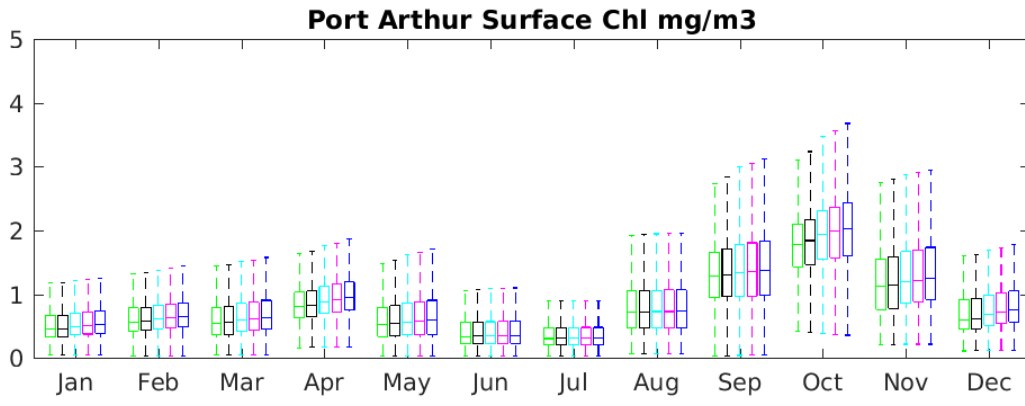


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



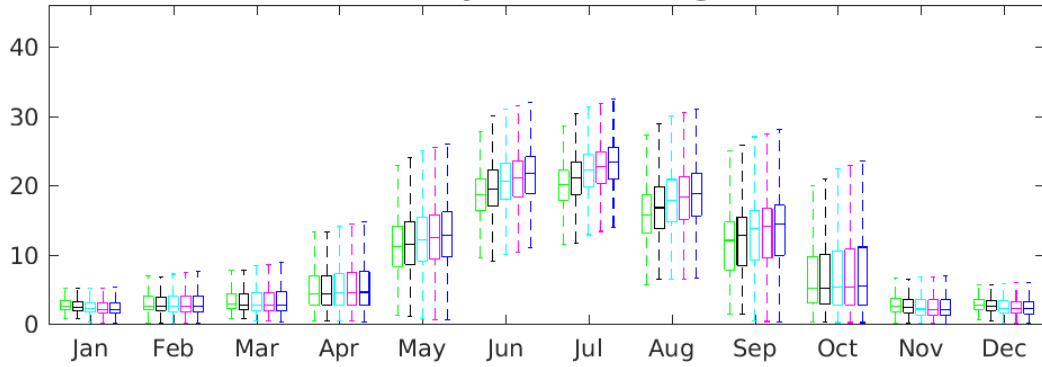
#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



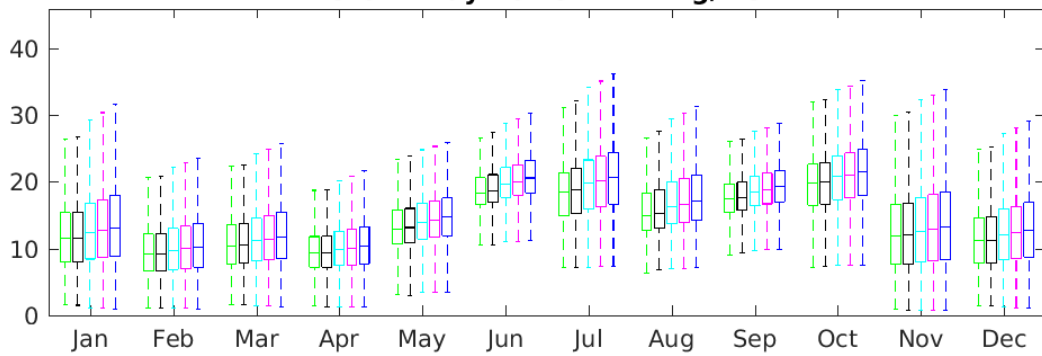


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

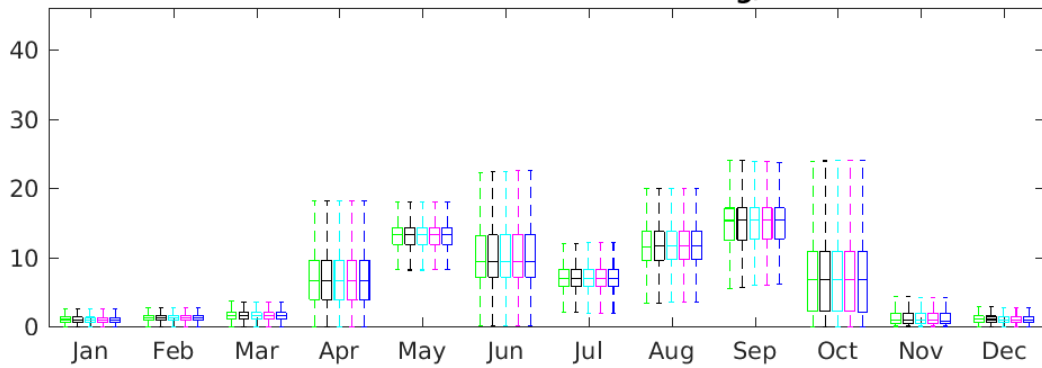
**Storm Bay Surface DIP mg/m3**



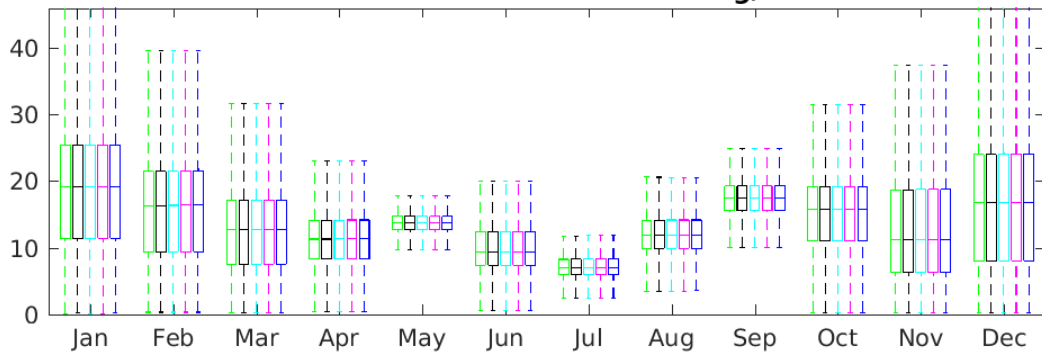
**Storm Bay Bottom DIP mg/m3**



**Offshore waters Surface DIP mg/m3**

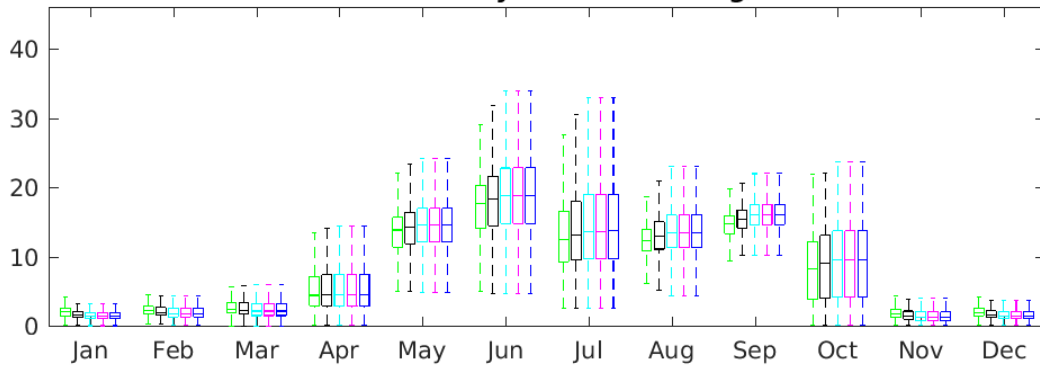


**Offshore waters Bottom DIP mg/m3**

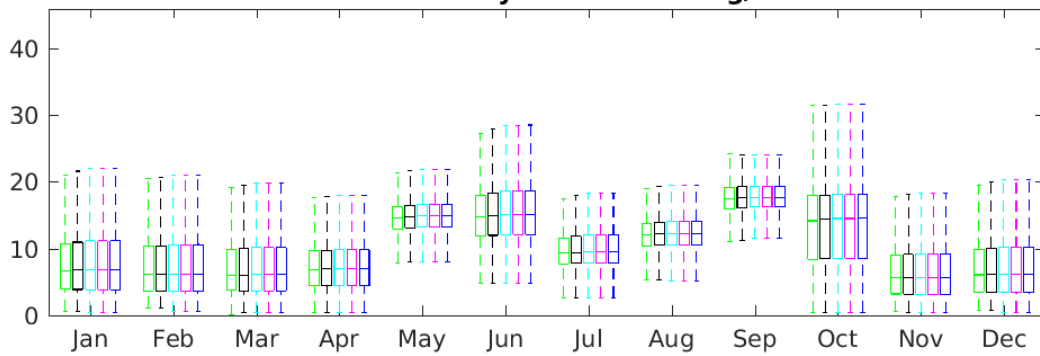


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

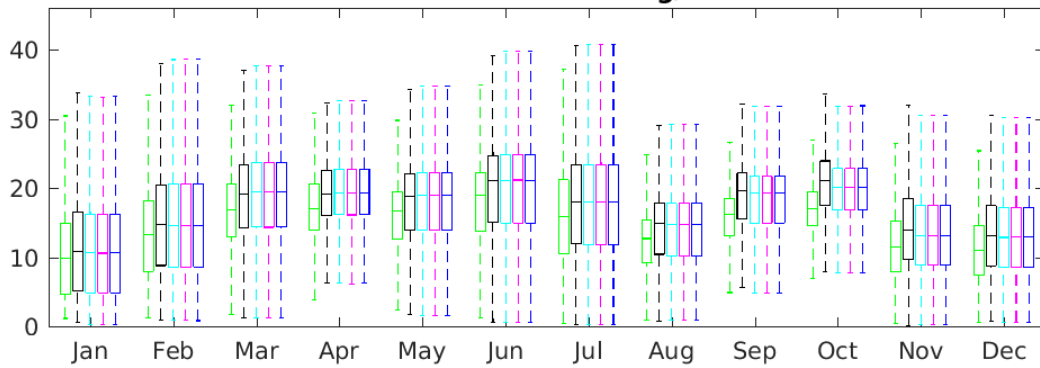
**South of Bruny Surface DIP mg/m3**



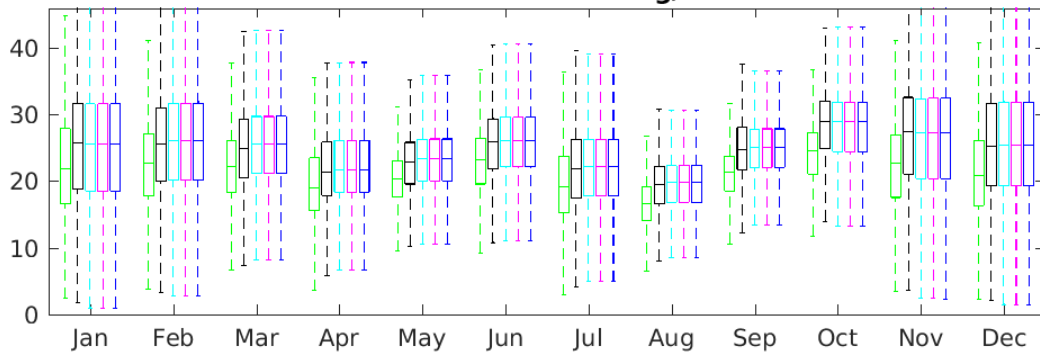
**South of Bruny Bottom DIP mg/m3**



**Huon Surface DIP mg/m3**

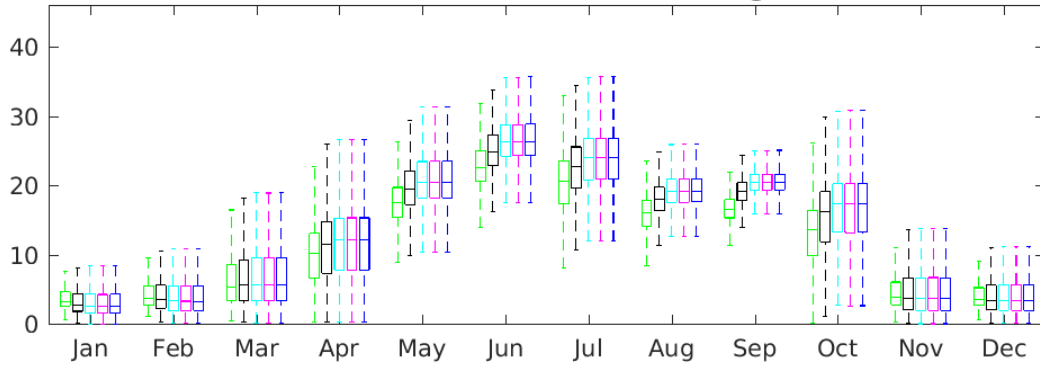


**Huon Bottom DIP mg/m3**

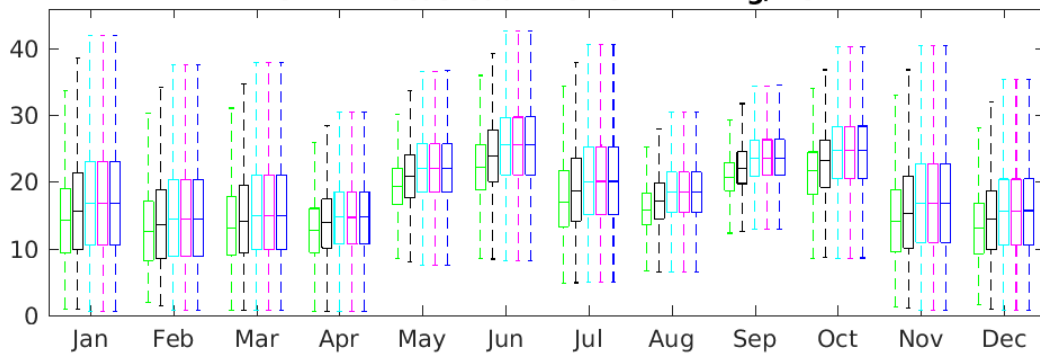


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

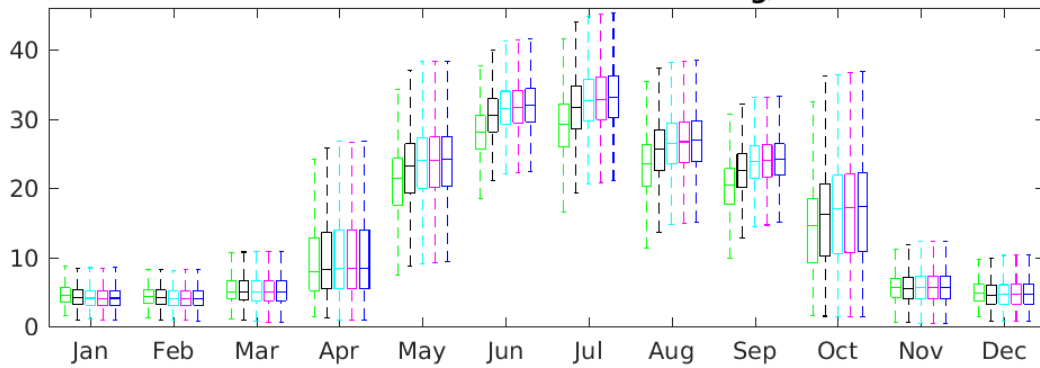
**S.Dentrecasteaux Surface DIP mg/m3**



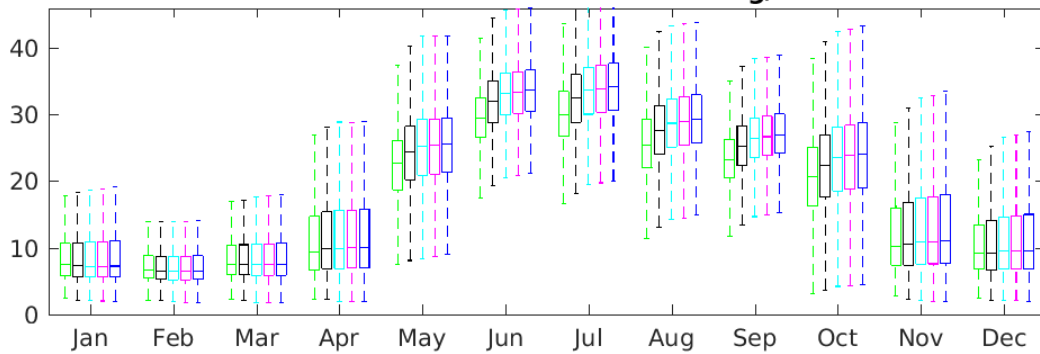
**S.Dentrecasteaux Bottom DIP mg/m3**



**N.Dentrecasteaux Surface DIP mg/m3**

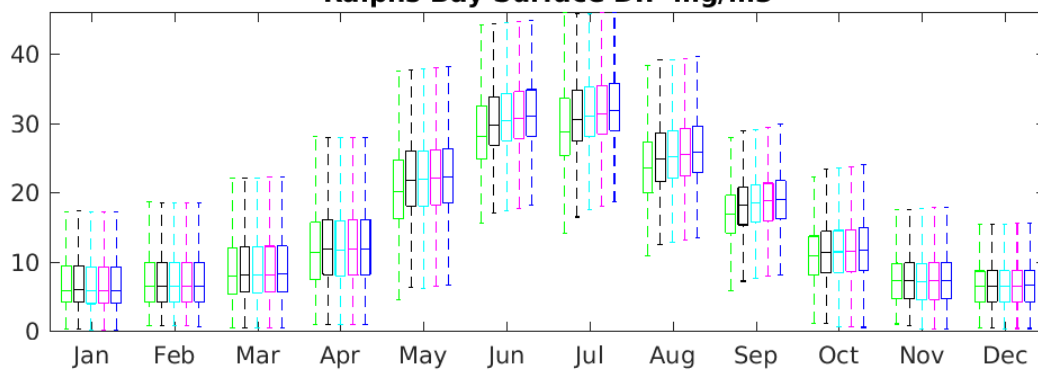


**N.Dentrecasteaux Bottom DIP mg/m3**

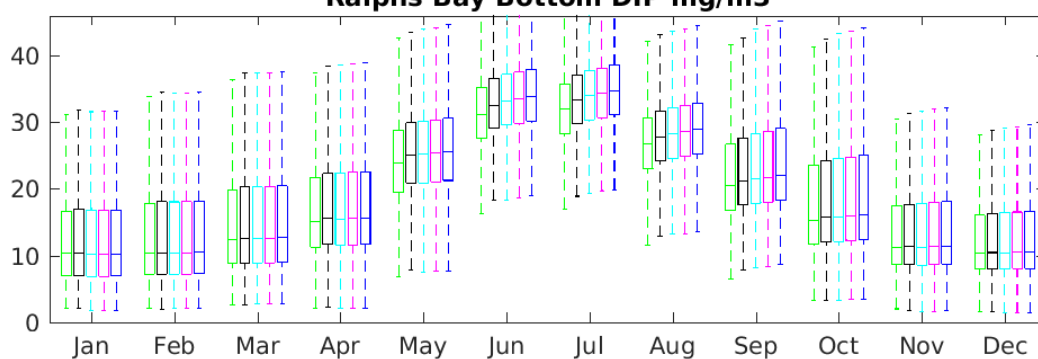


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

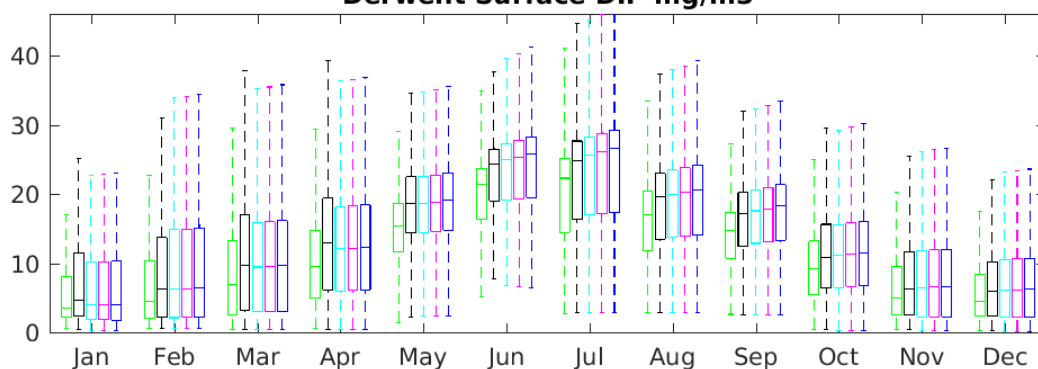
**Ralphps Bay Surface DIP mg/m3**



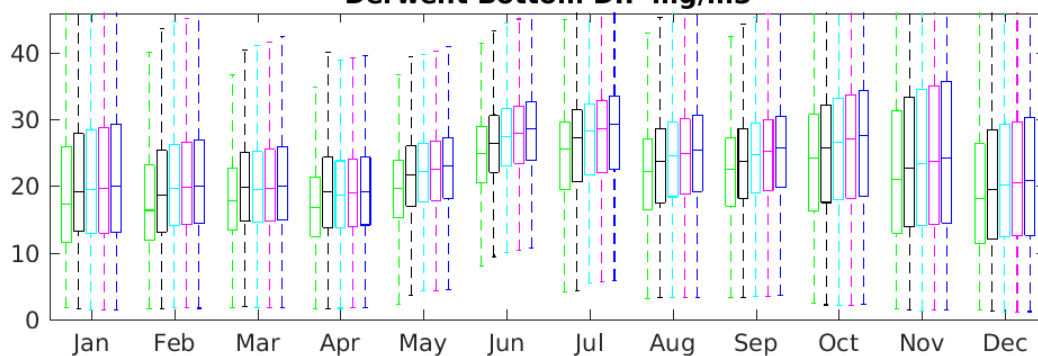
**Ralphps Bay Bottom DIP mg/m3**



**Derwent Surface DIP mg/m3**

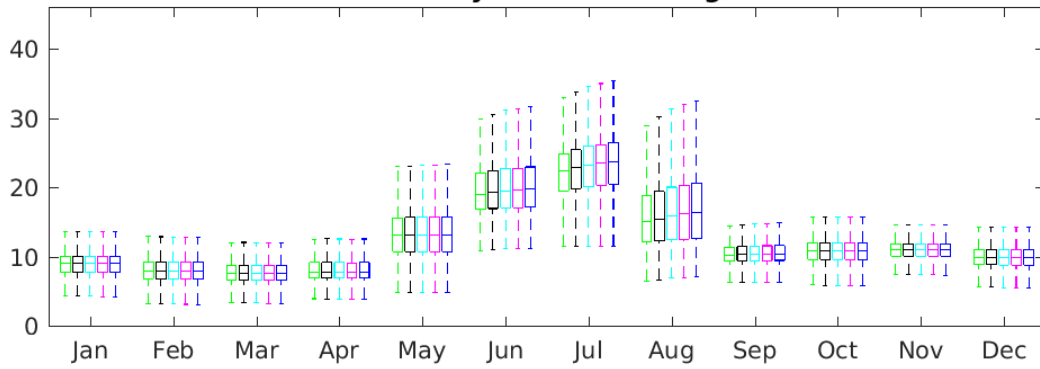


**Derwent Bottom DIP mg/m3**

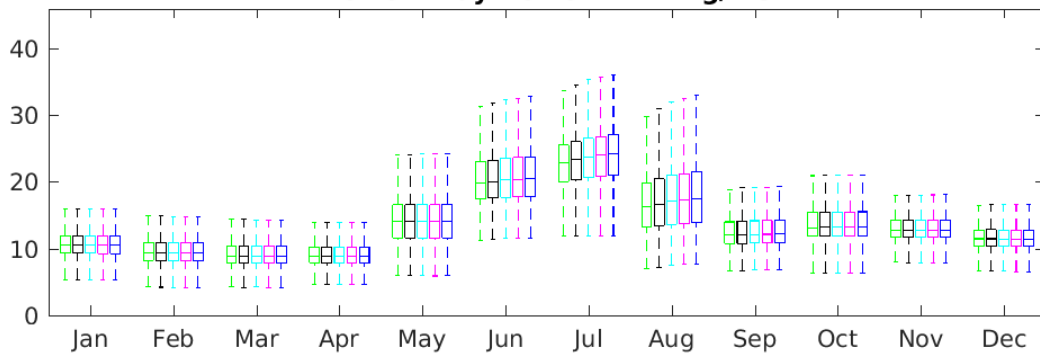


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

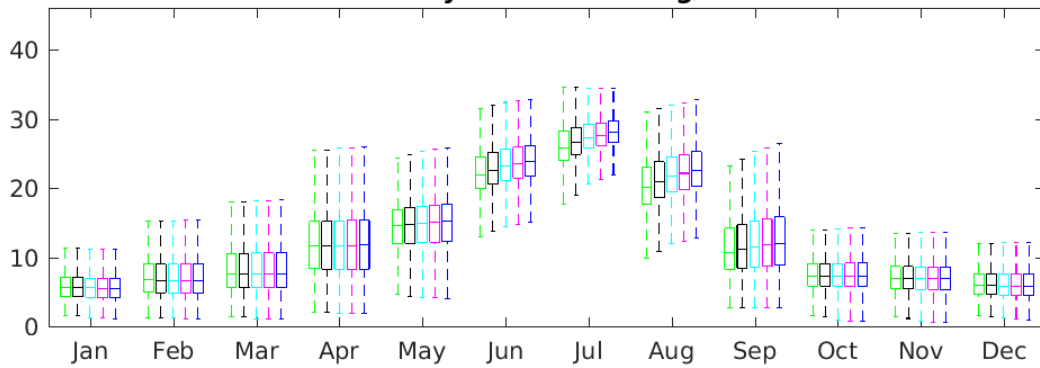
**Norfolk Bay Surface DIP mg/m3**



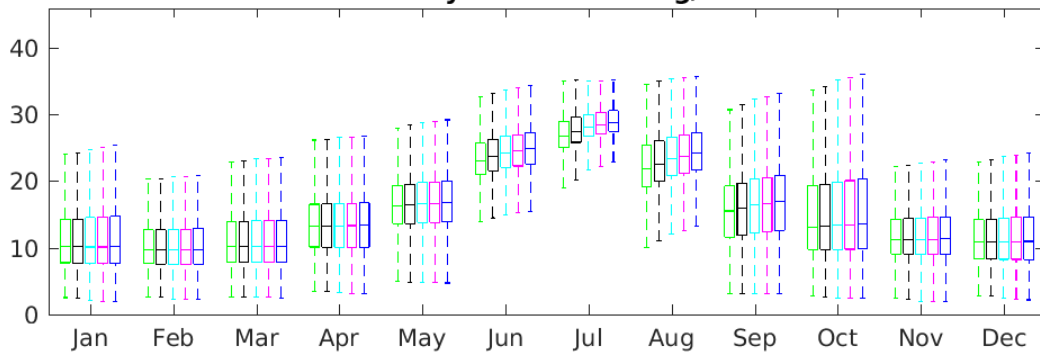
**Norfolk Bay Bottom DIP mg/m3**



**F-H Bay Surface DIP mg/m3**

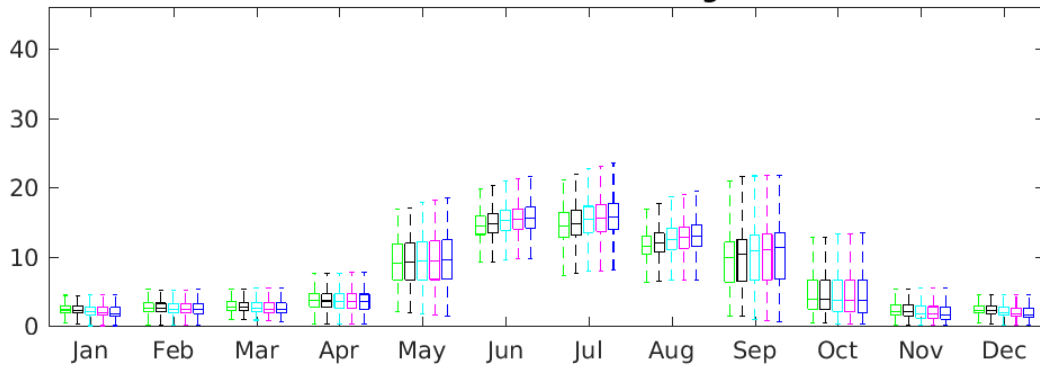


**F-H Bay Bottom DIP mg/m3**

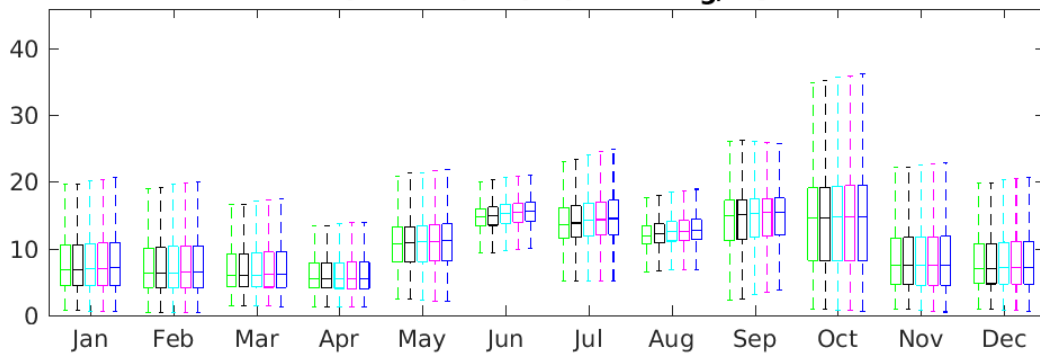


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

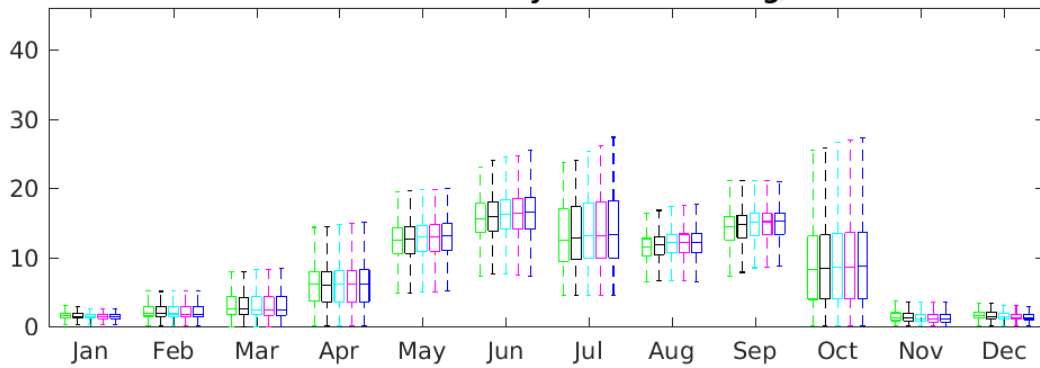
**Port Arthur Surface DIP mg/m3**



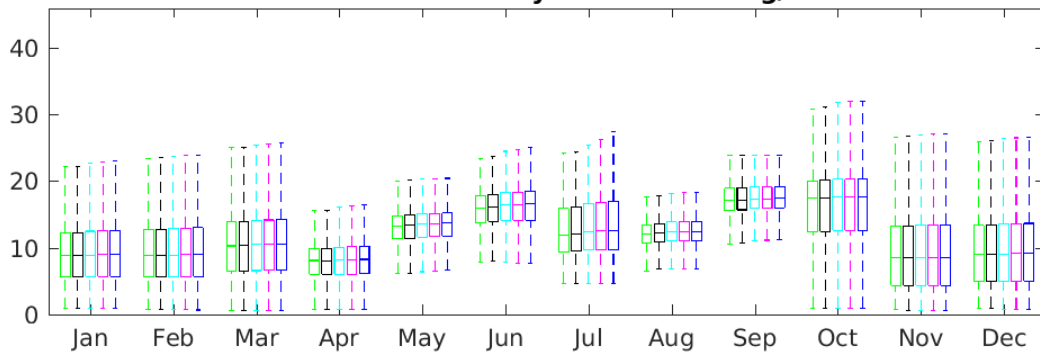
**Port Arthur Bottom DIP mg/m3**



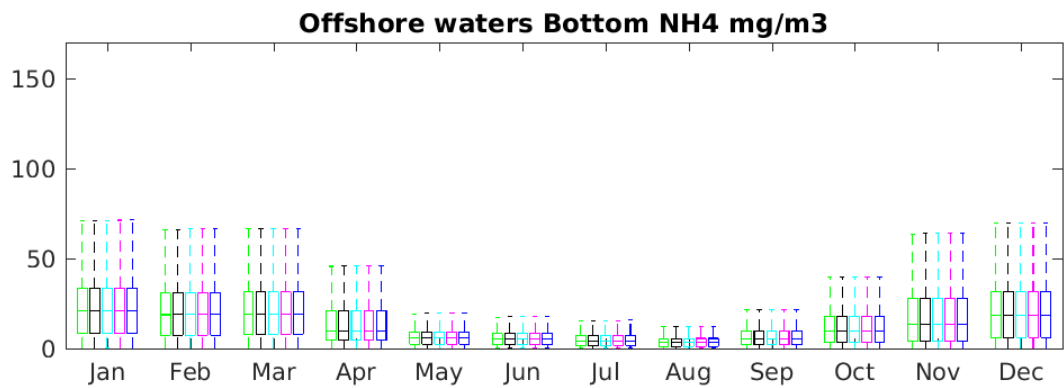
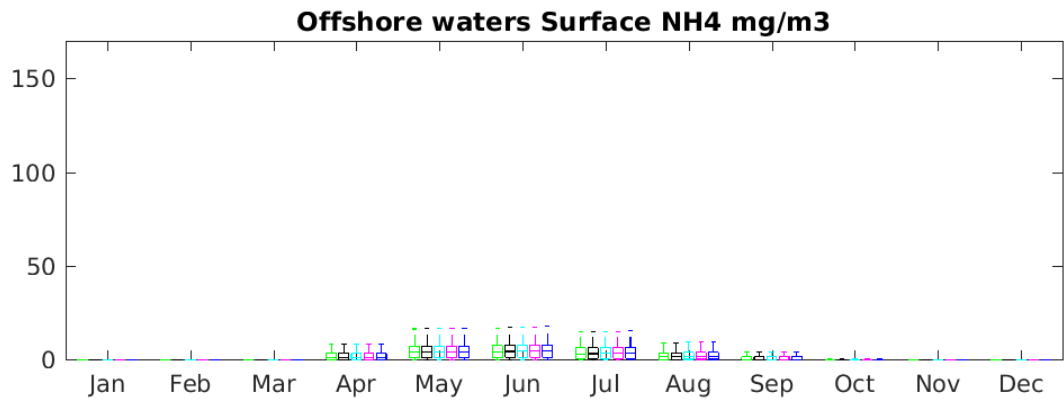
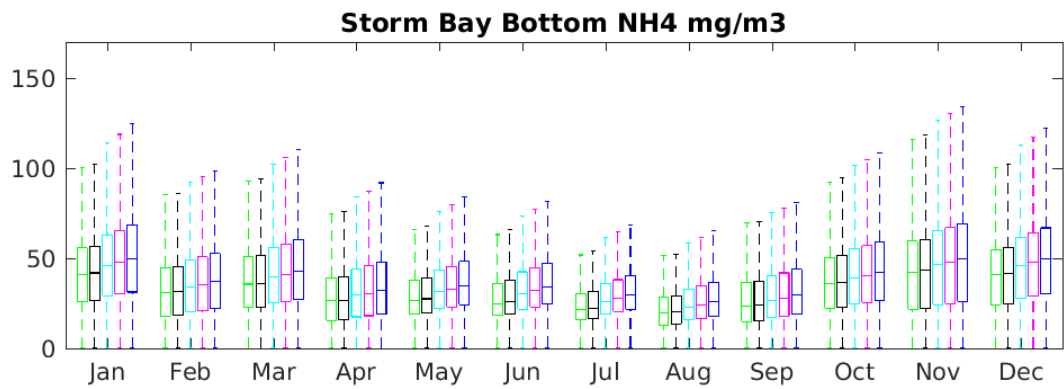
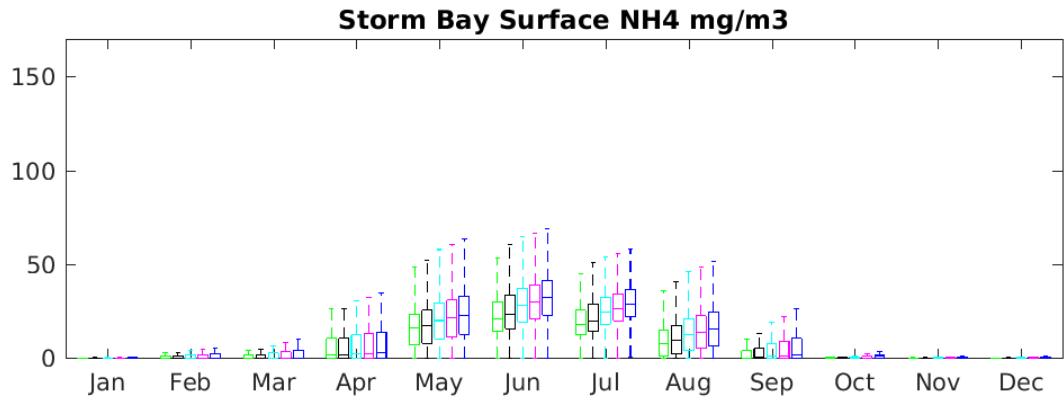
**Offshore Storm Bay Surface DIP mg/m3**



**Offshore Storm Bay Bottom DIP mg/m3**



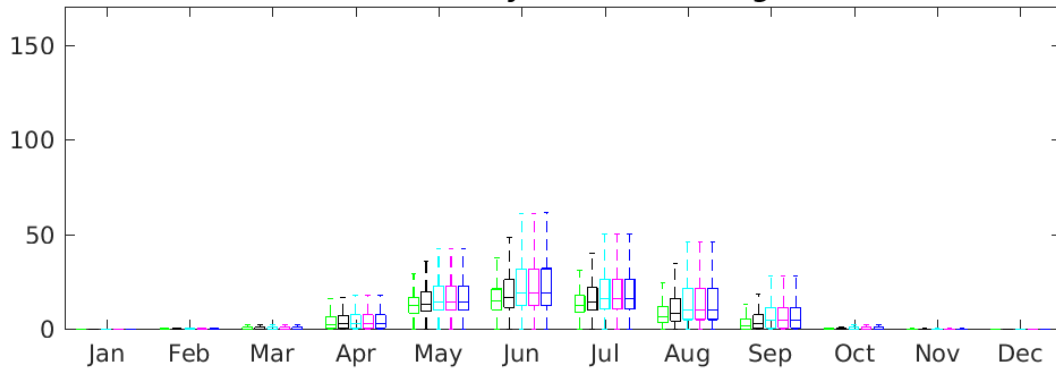
#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



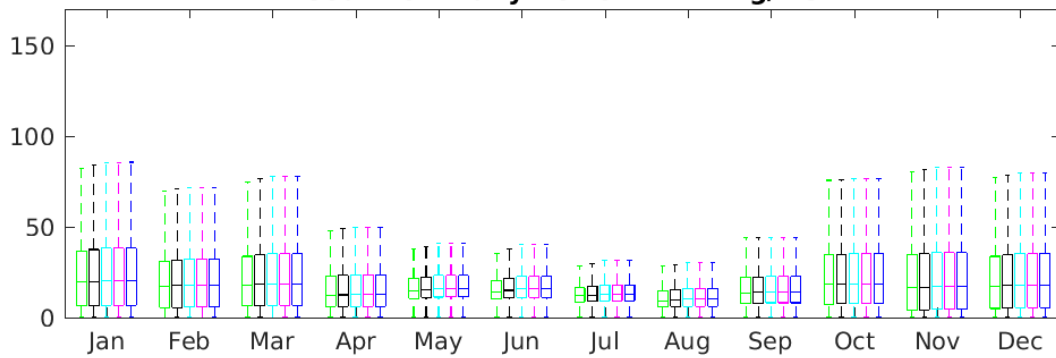
#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



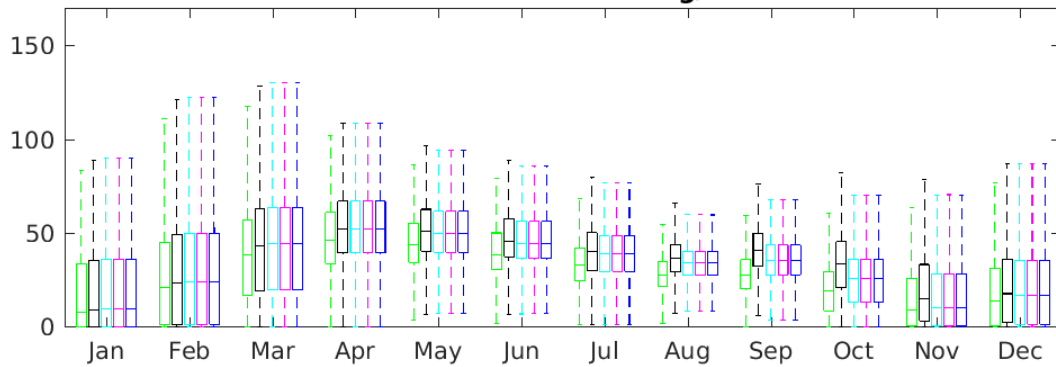
**South of Bruny Surface NH4 mg/m3**



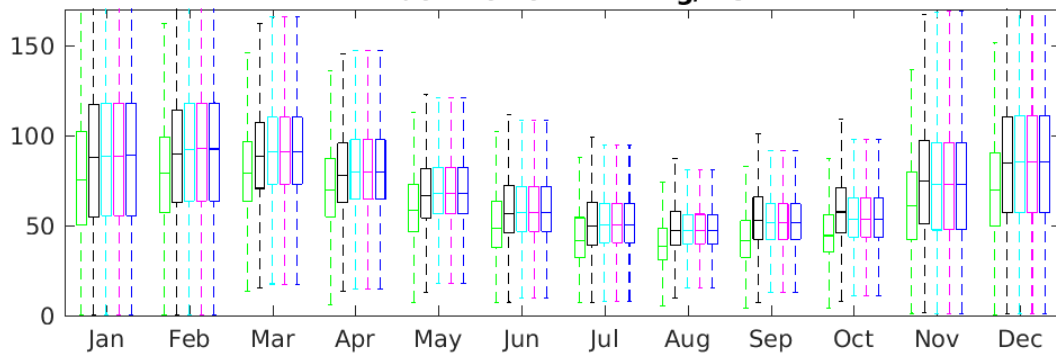
**South of Bruny Bottom NH4 mg/m3**



**Huon Surface NH4 mg/m3**

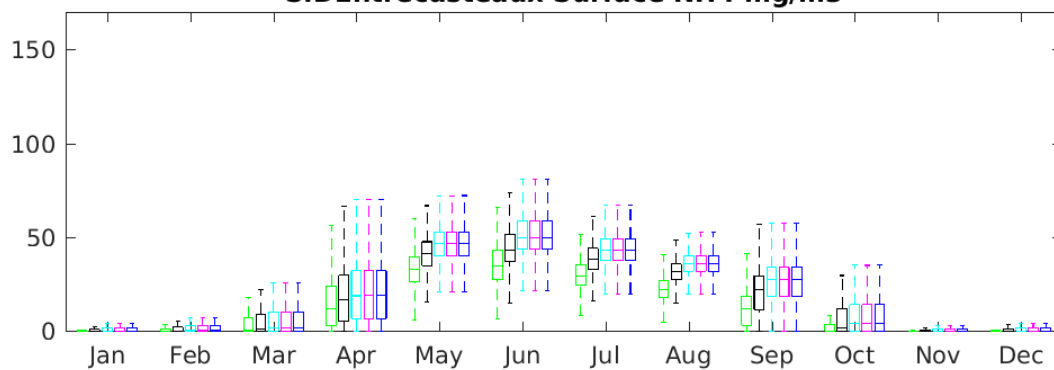


**Huon Bottom NH4 mg/m3**

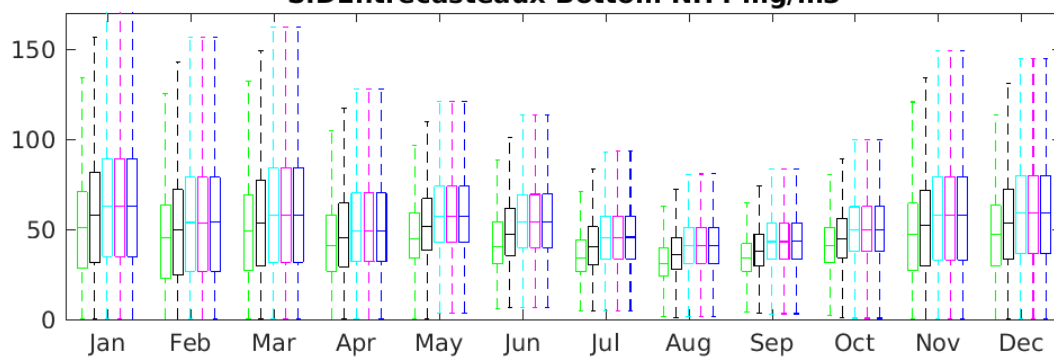


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

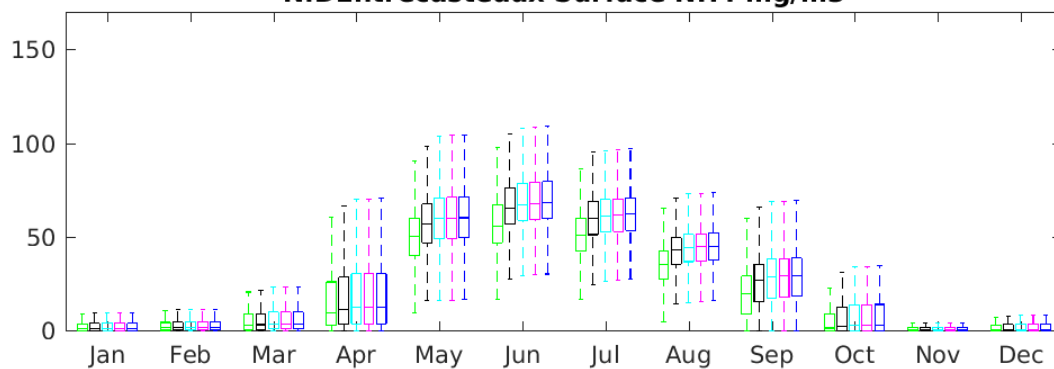
**S.Dentrecasteaux Surface NH4 mg/m3**



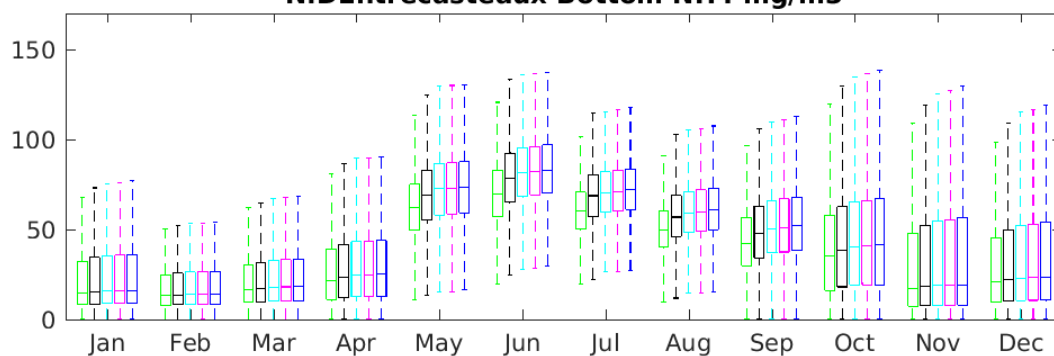
**S.Dentrecasteaux Bottom NH4 mg/m3**



**N.Dentrecasteaux Surface NH4 mg/m3**

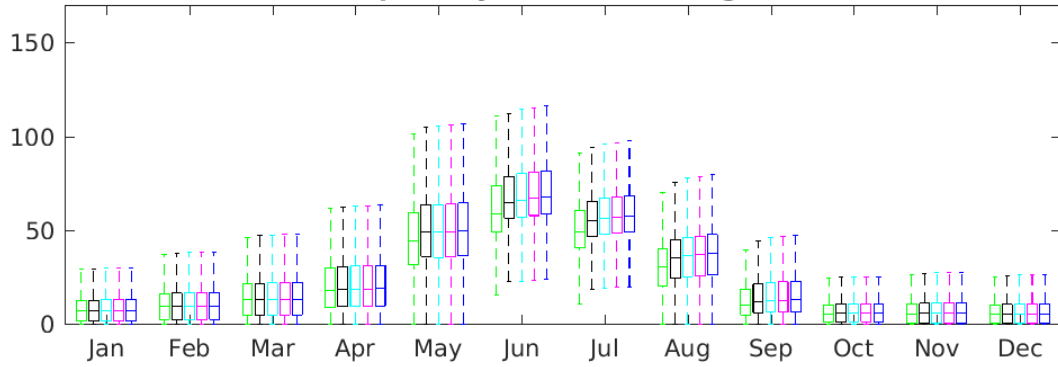


**N.Dentrecasteaux Bottom NH4 mg/m3**

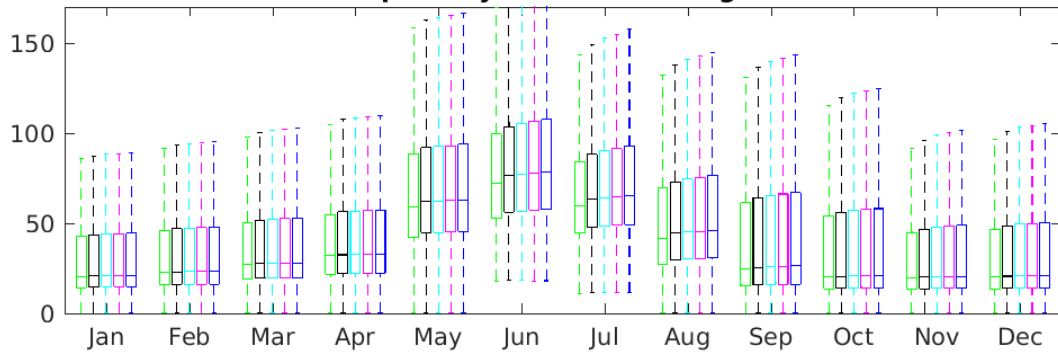


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

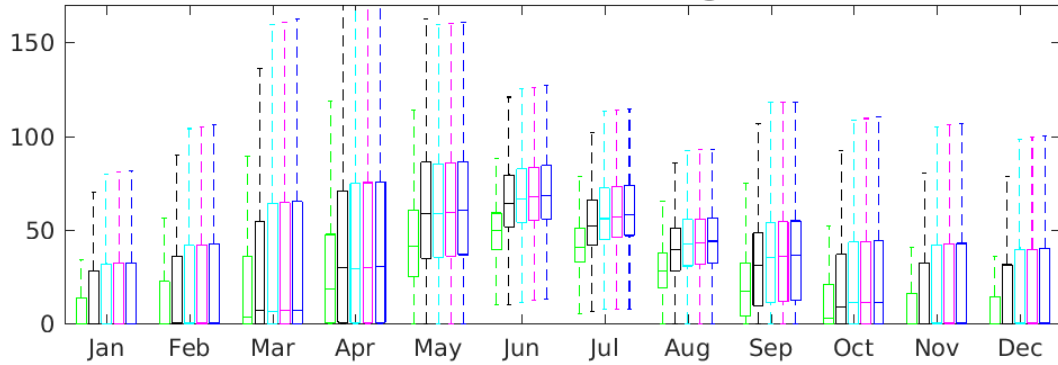
**Ralphps Bay Surface NH4 mg/m3**



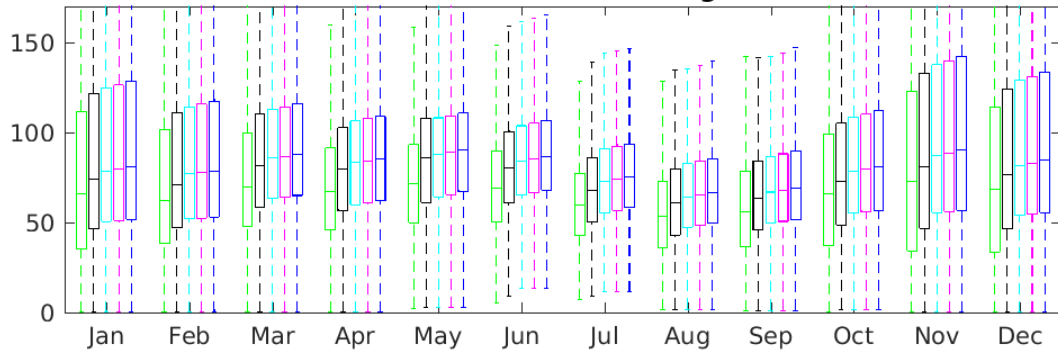
**Ralphps Bay Bottom NH4 mg/m3**



**Derwent Surface NH4 mg/m3**

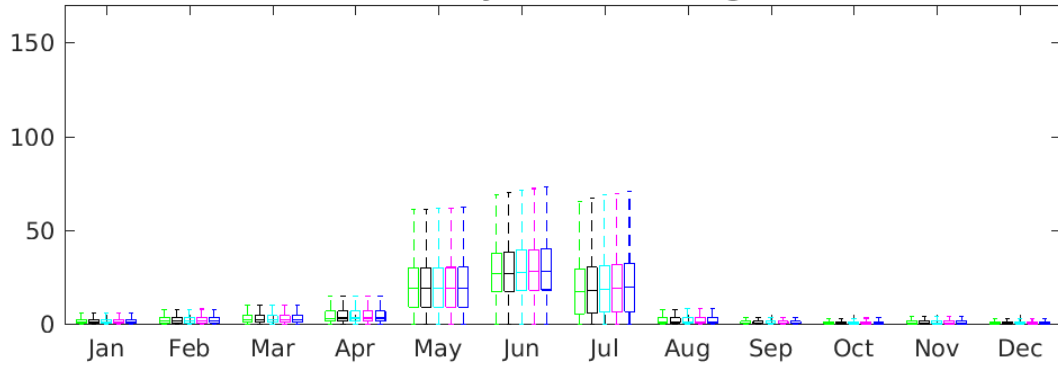


**Derwent Bottom NH4 mg/m3**

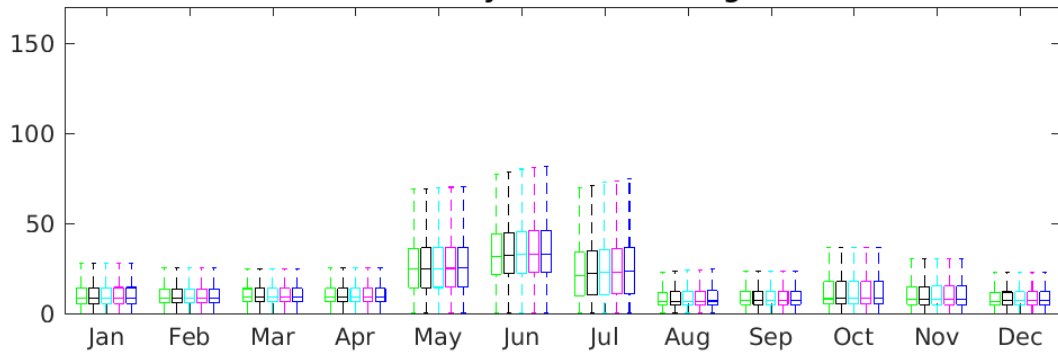


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

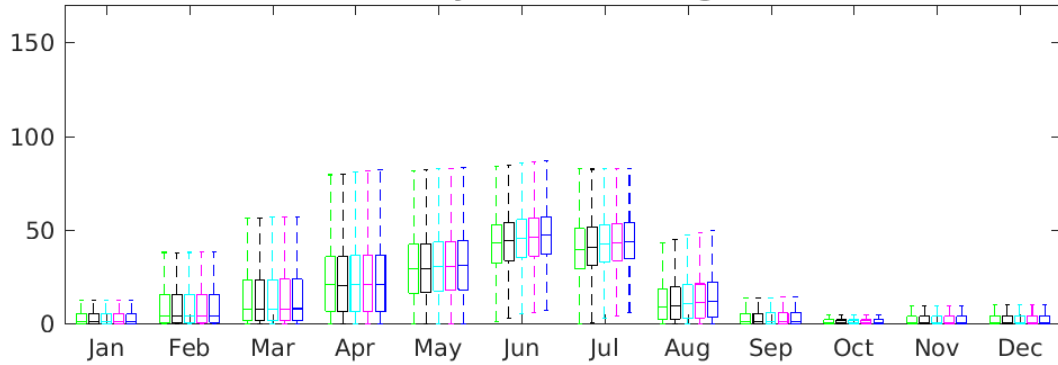
**Norfolk Bay Surface NH4 mg/m3**



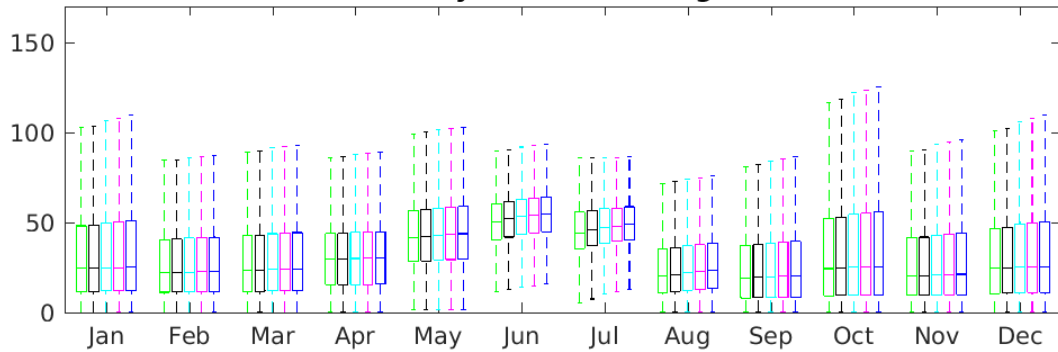
**Norfolk Bay Bottom NH4 mg/m3**



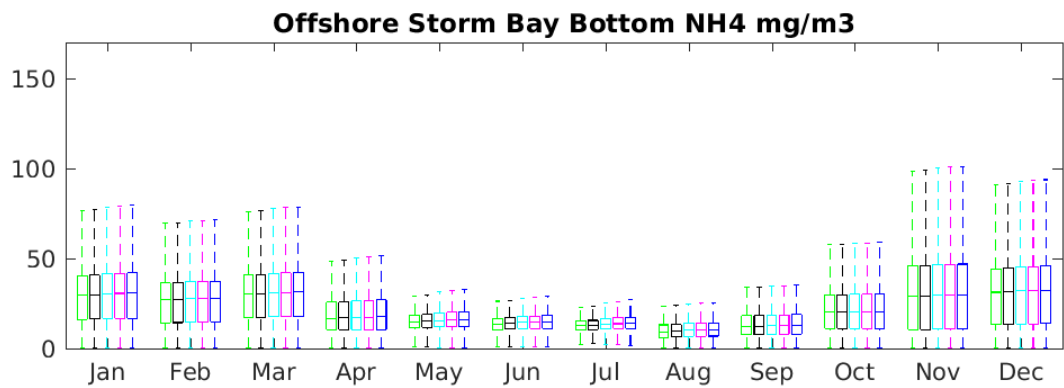
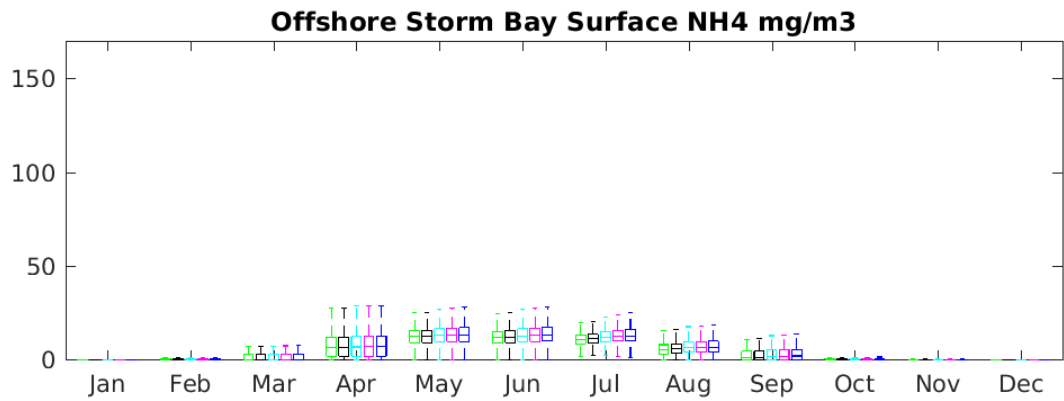
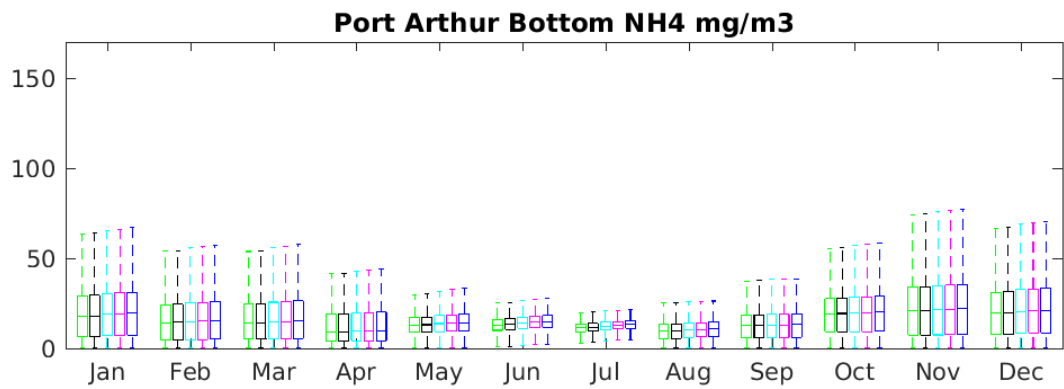
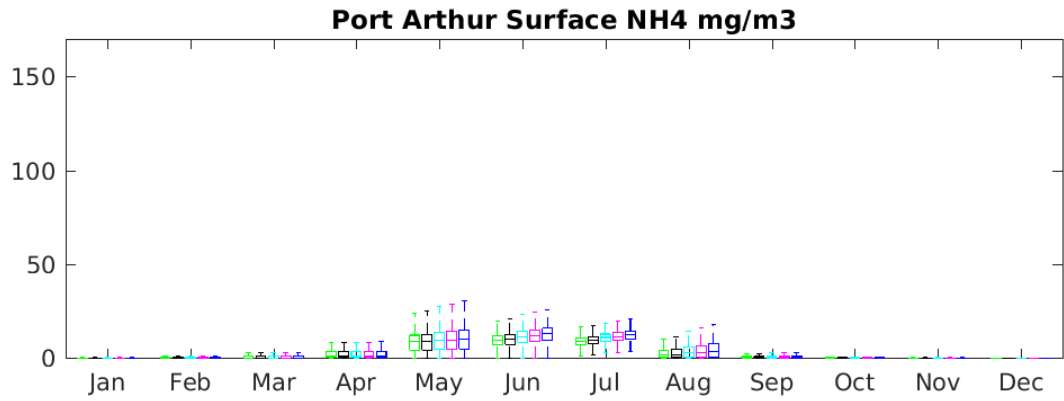
**F-H Bay Surface NH4 mg/m3**



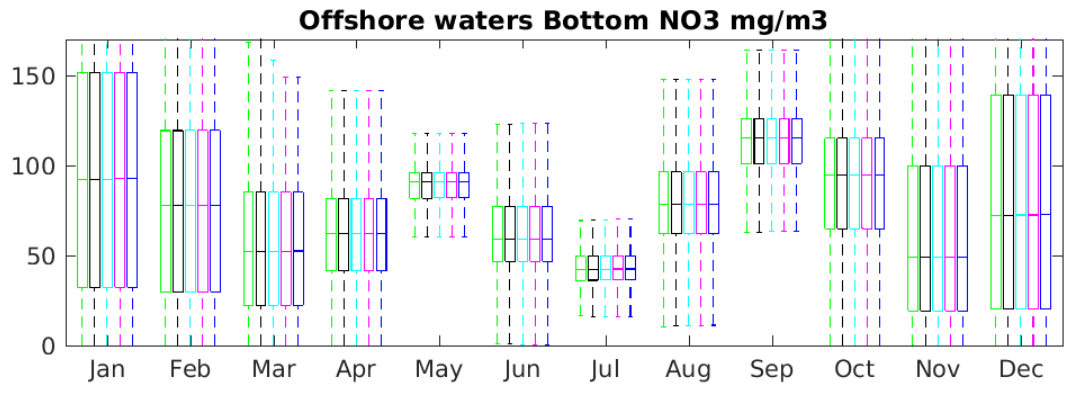
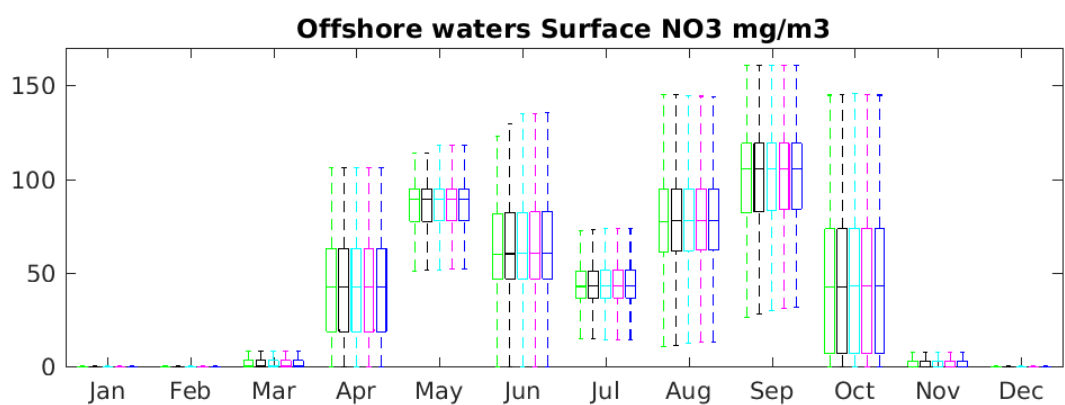
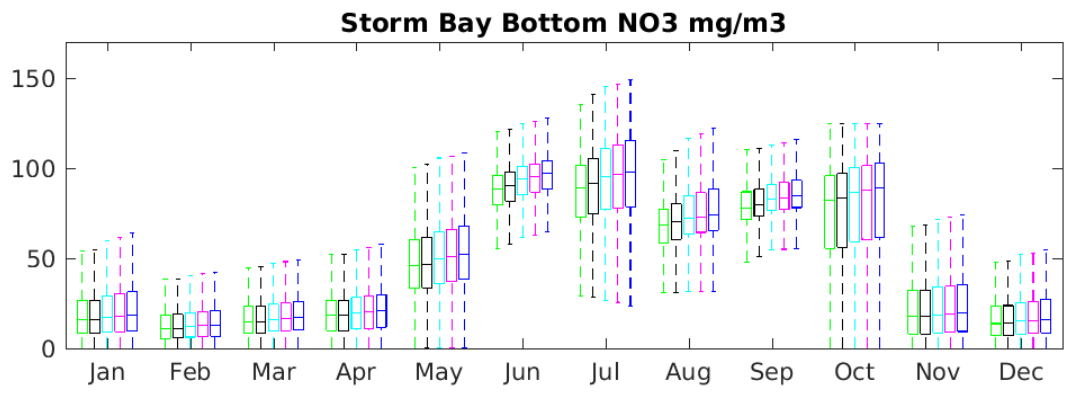
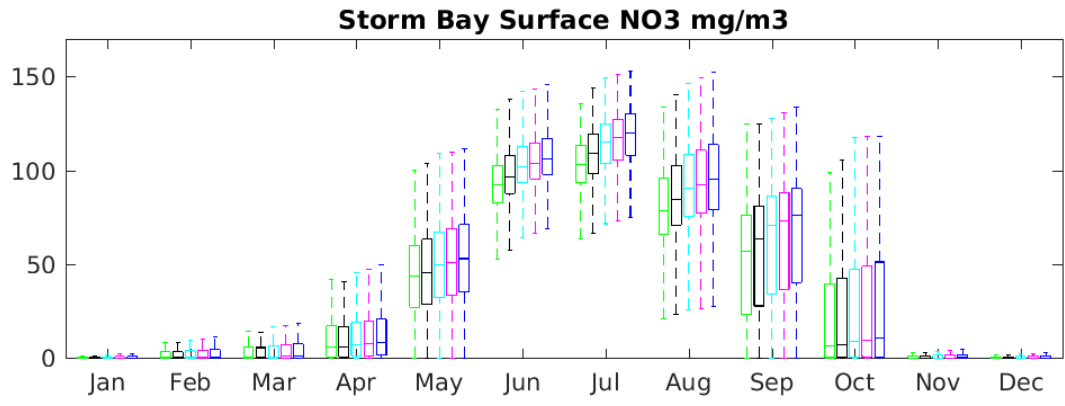
**F-H Bay Bottom NH4 mg/m3**



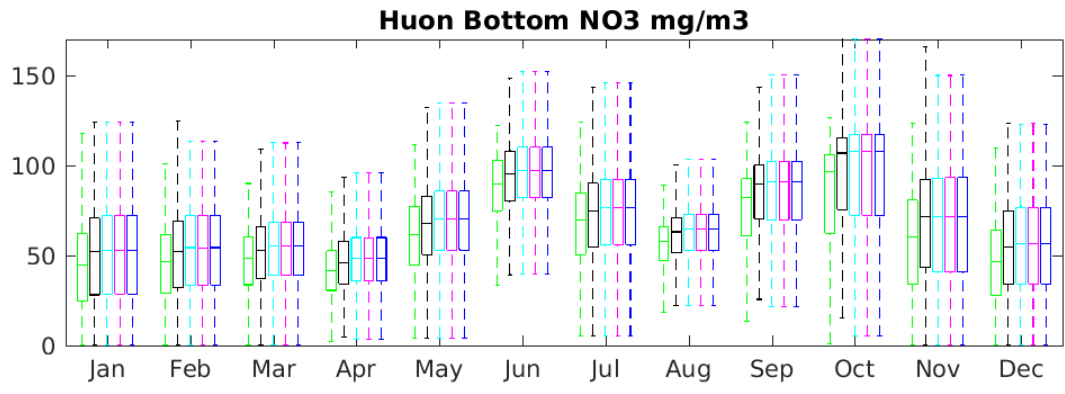
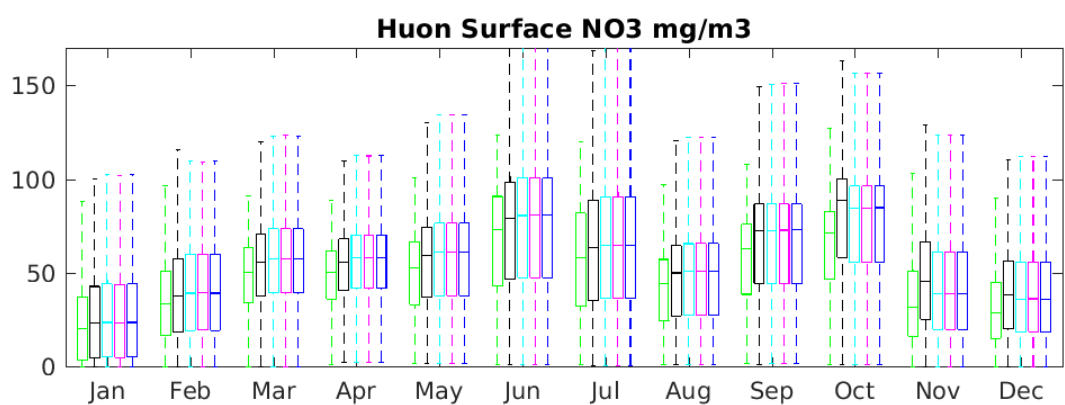
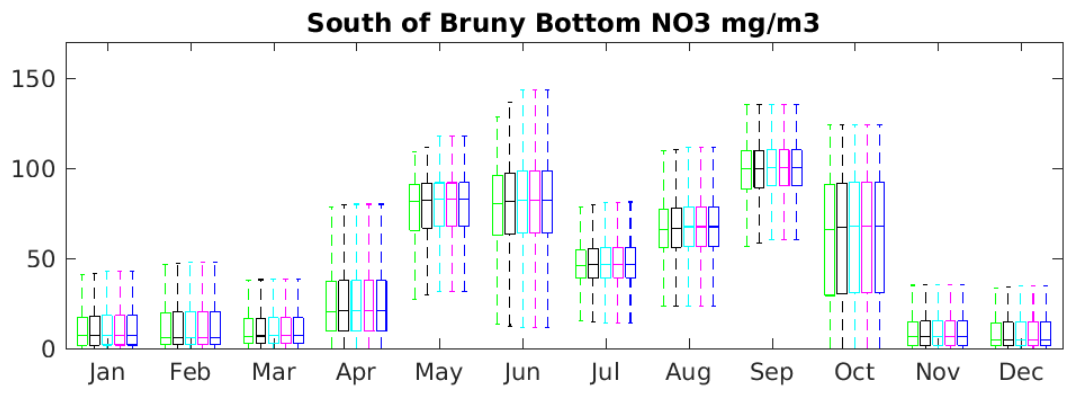
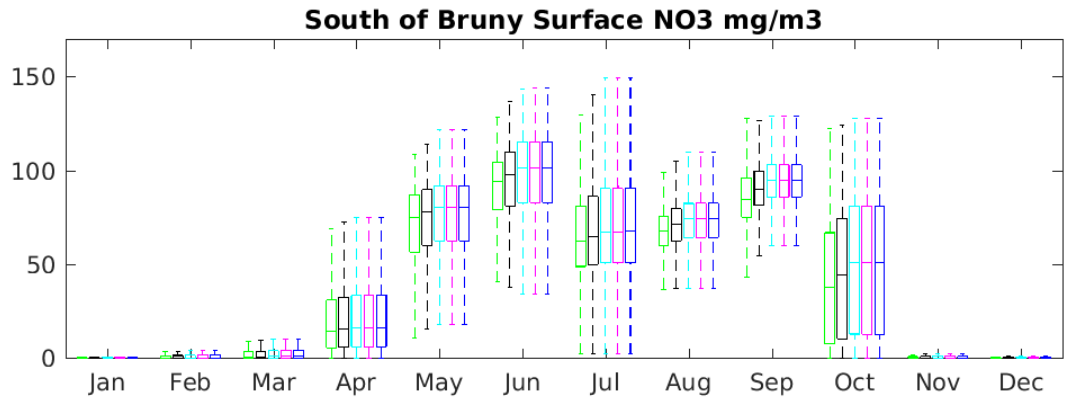
#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

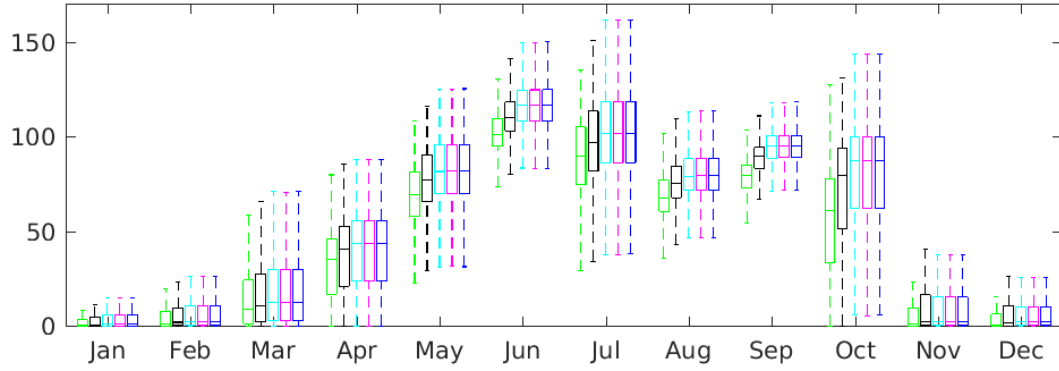


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

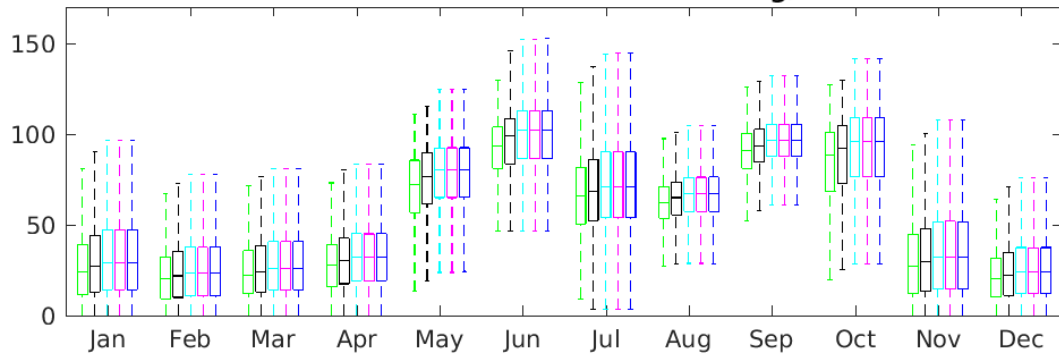


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

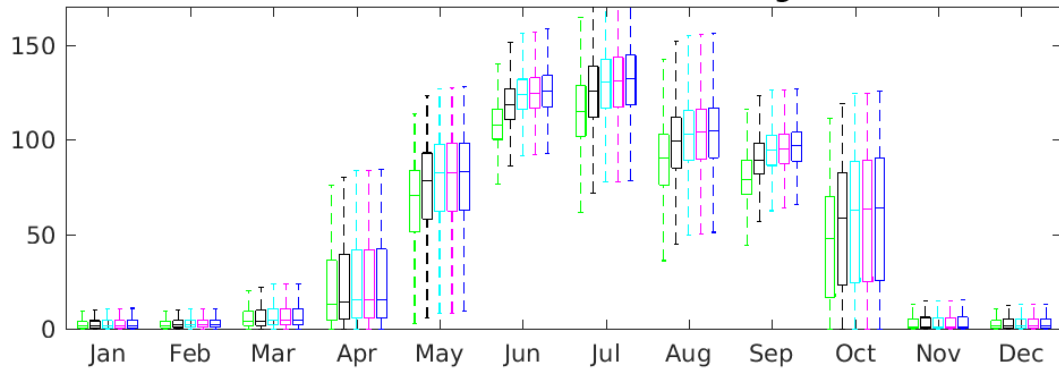
**S.Dentrecasteaux Surface NO3 mg/m3**



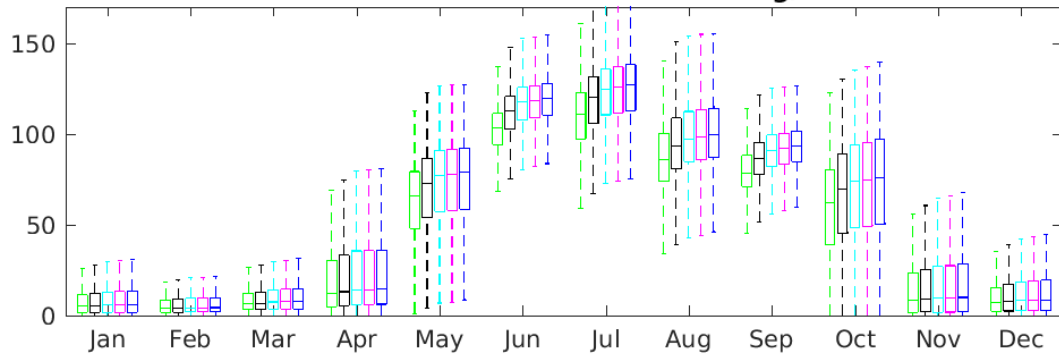
**S.Dentrecasteaux Bottom NO3 mg/m3**



**N.Dentrecasteaux Surface NO3 mg/m3**

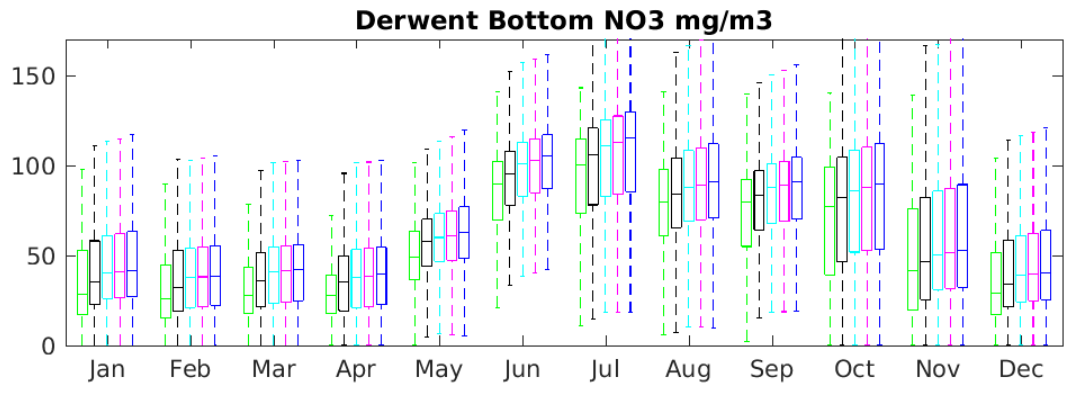
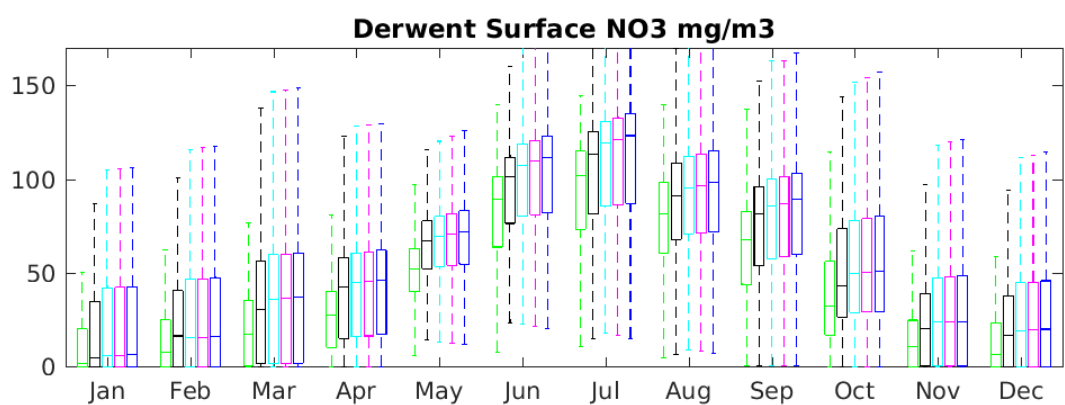
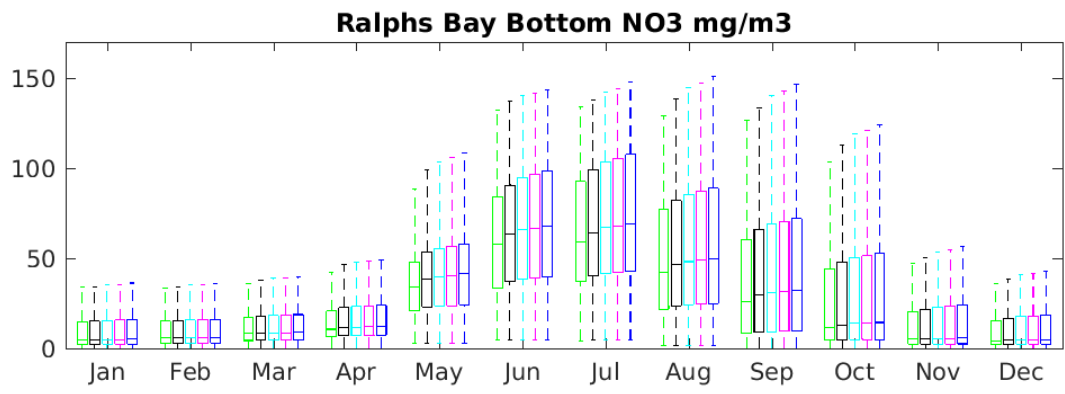
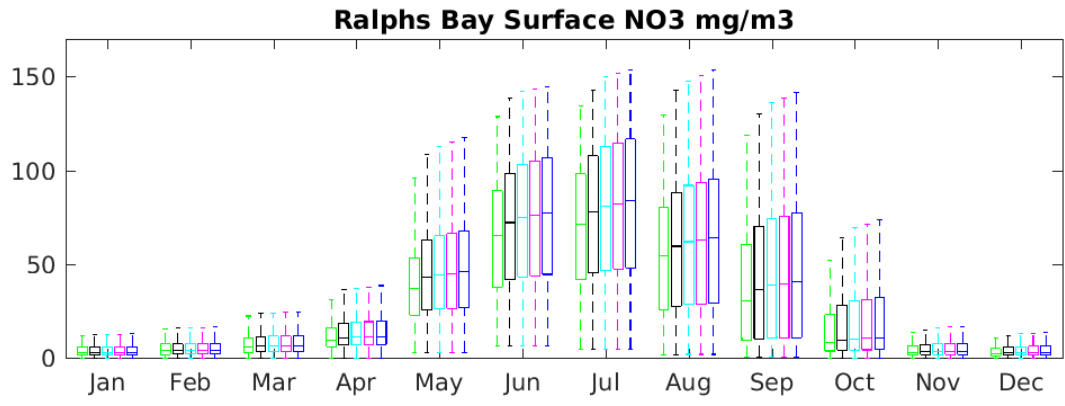


**N.Dentrecasteaux Bottom NO3 mg/m3**



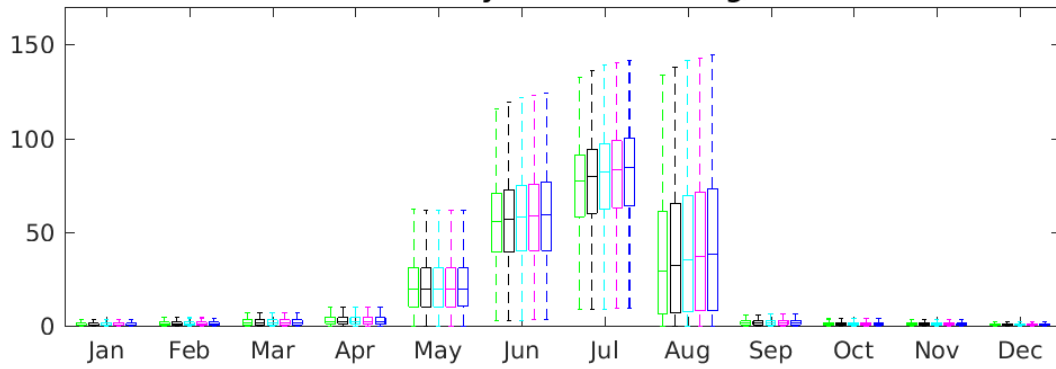
#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



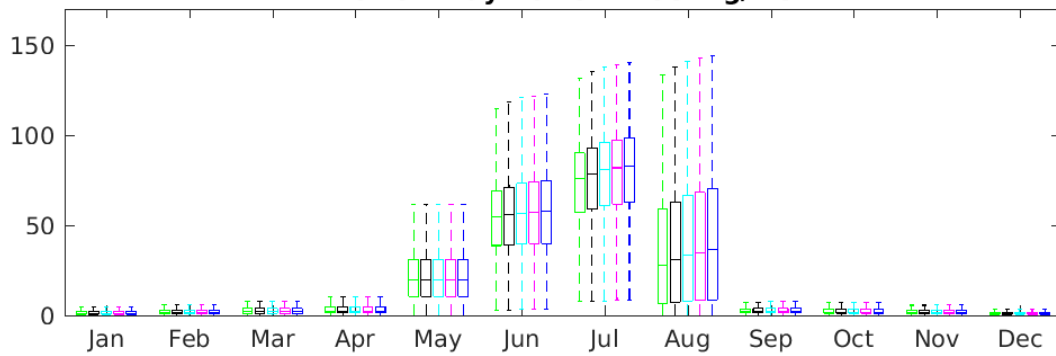


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

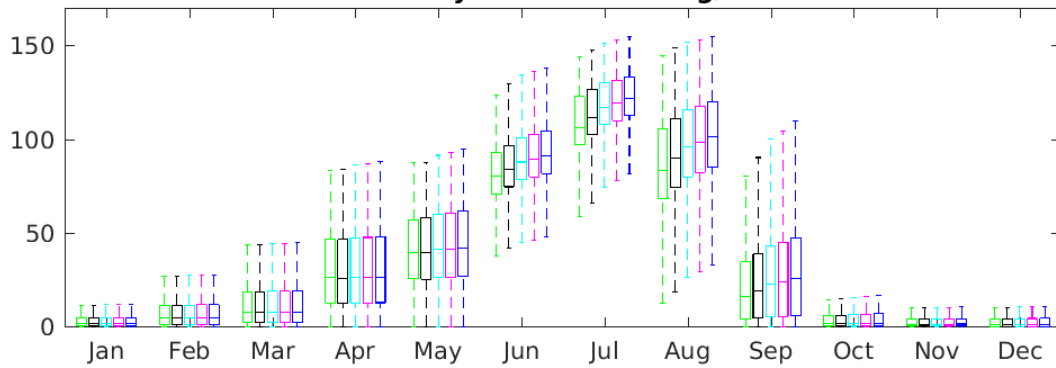
**Norfolk Bay Surface NO3 mg/m3**



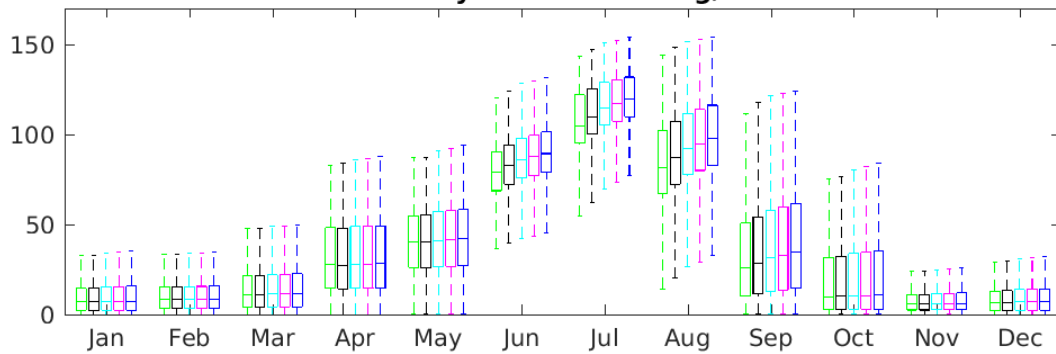
**Norfolk Bay Bottom NO3 mg/m3**



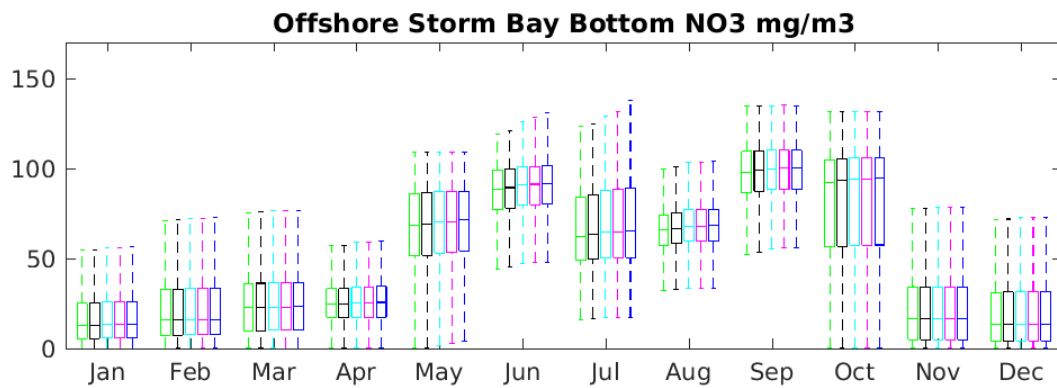
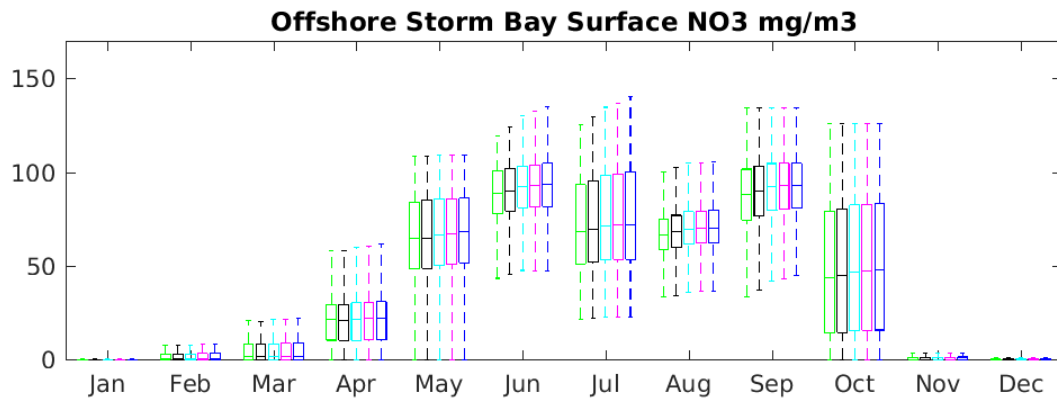
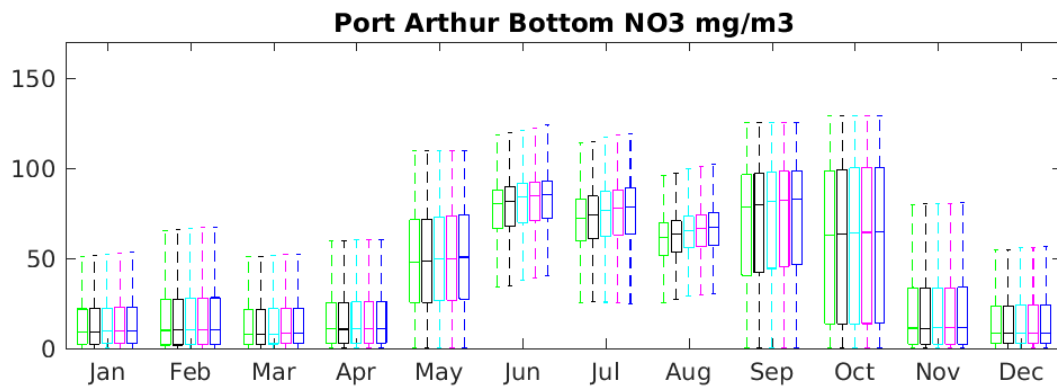
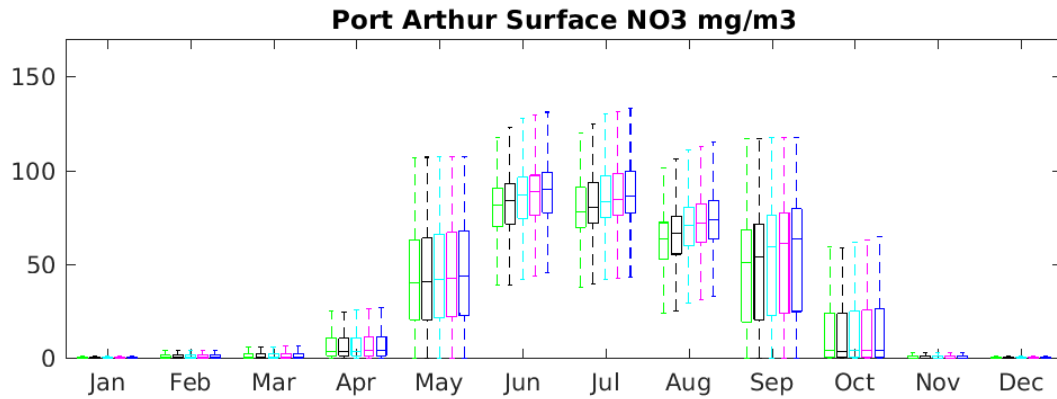
**F-H Bay Surface NO3 mg/m3**



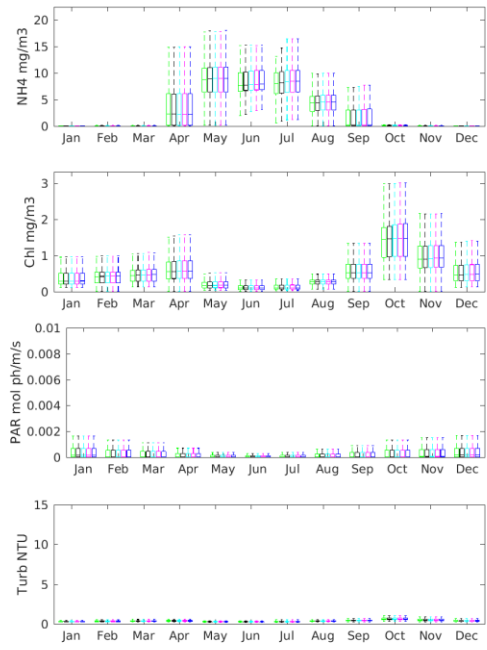
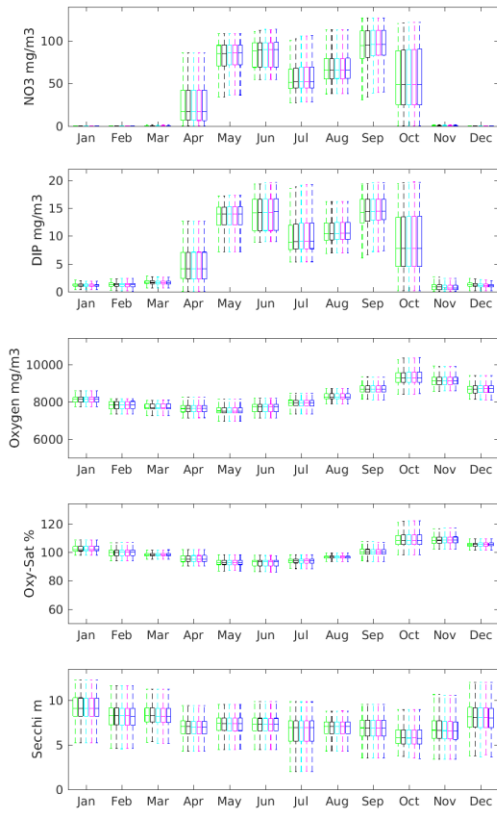
**F-H Bay Bottom NO3 mg/m3**



#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB

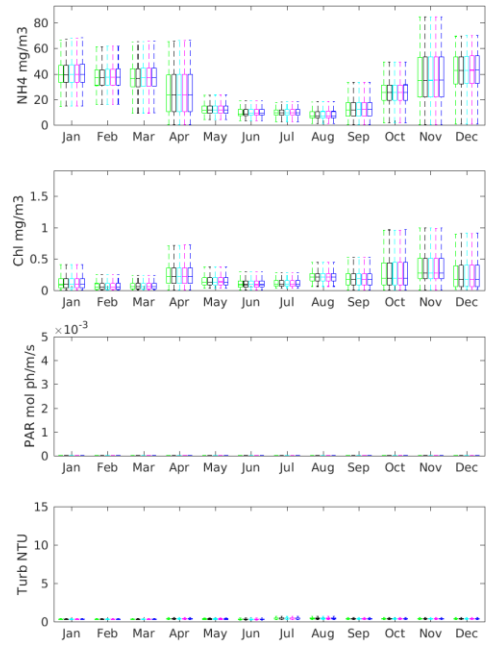
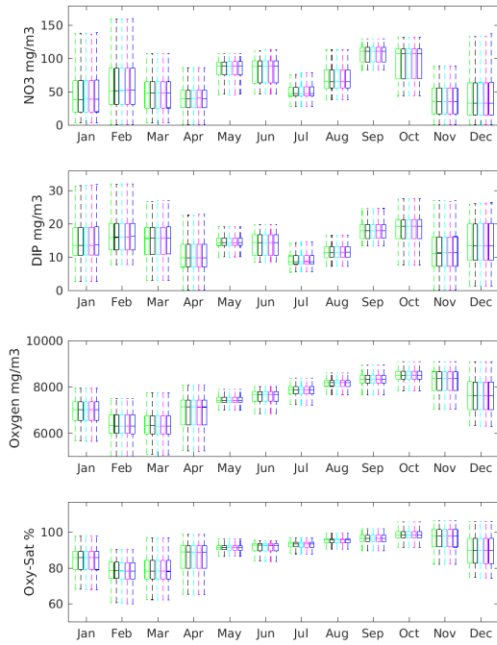


#2 Pre-Development #3 Pre-SB (c.2013) #4 2020+2ktN in SB #4.5 2020+3ktN in SB #5 2020+4.5ktN in SB



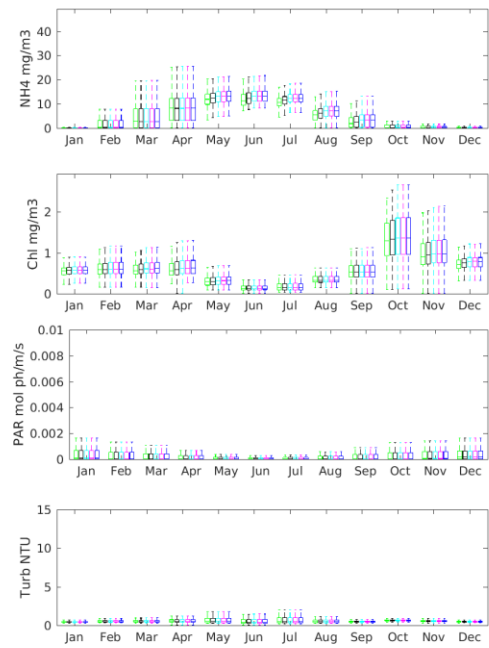
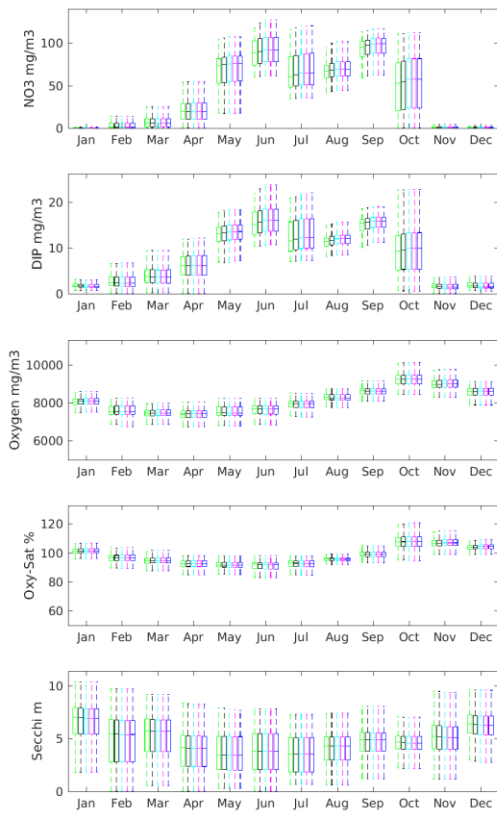
### SP\_3 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



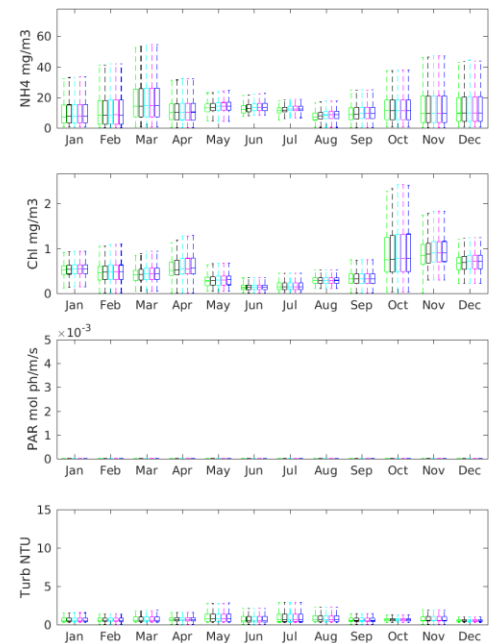
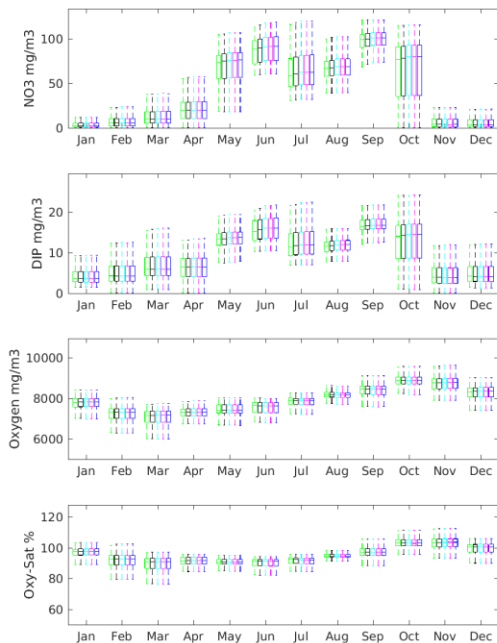
### SP\_3 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



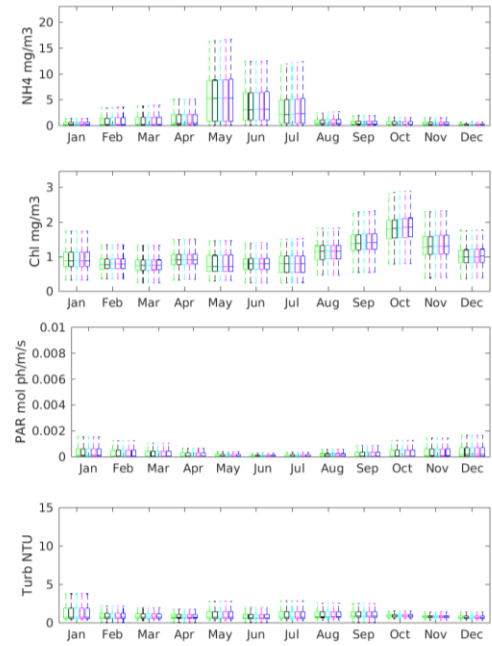
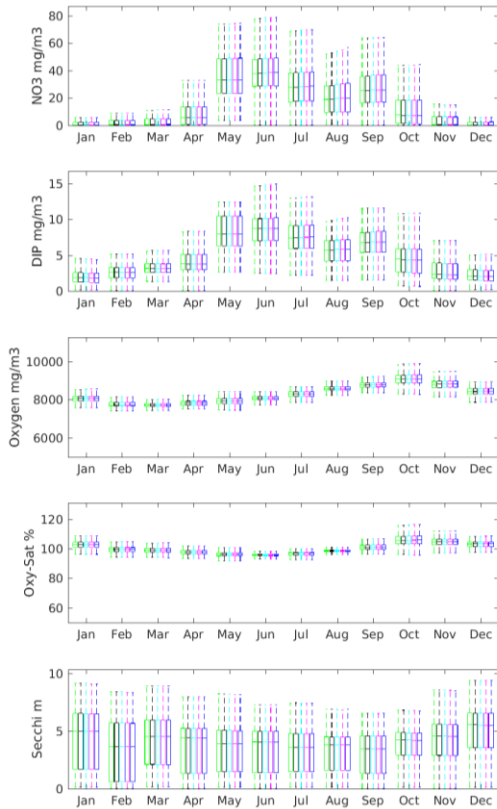
### BG\_12 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



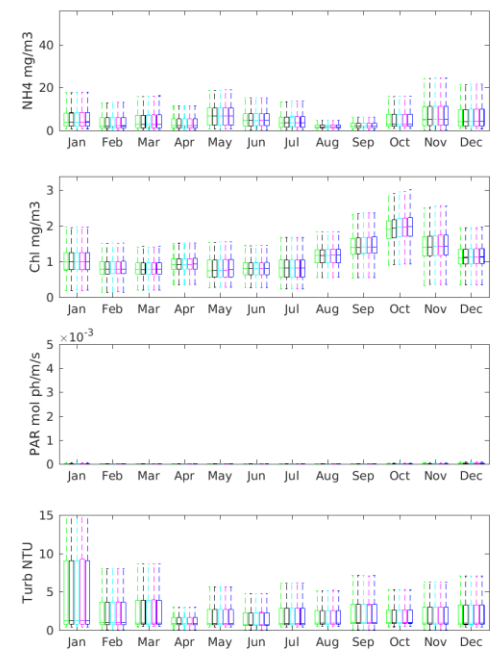
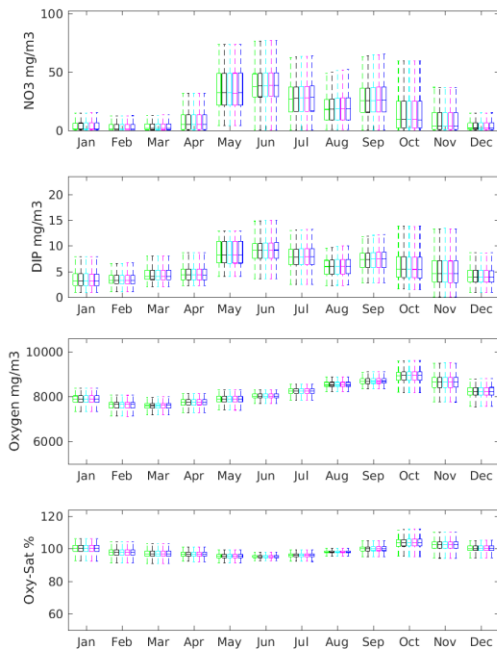
### BG\_12 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



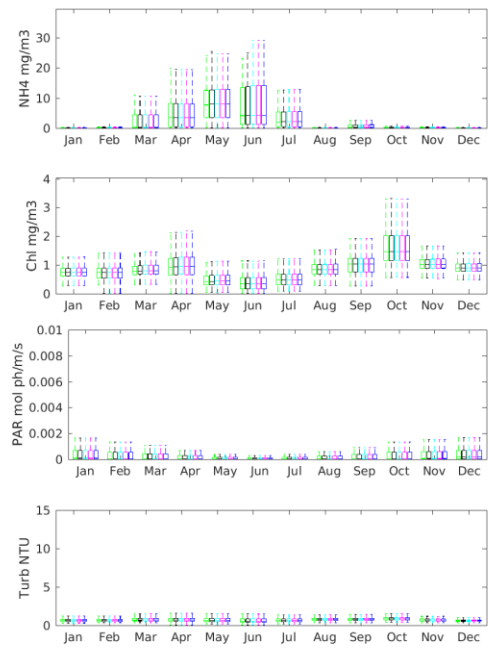
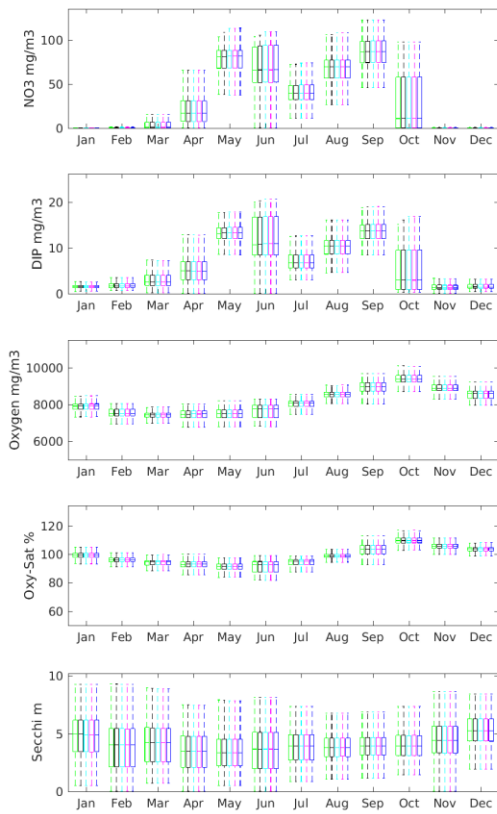
### BG\_9 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



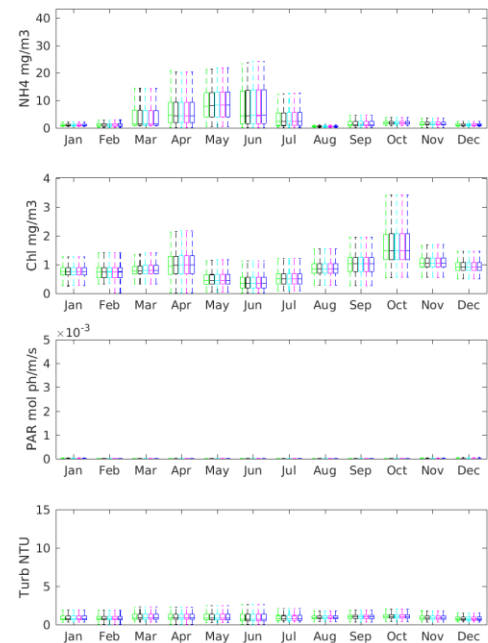
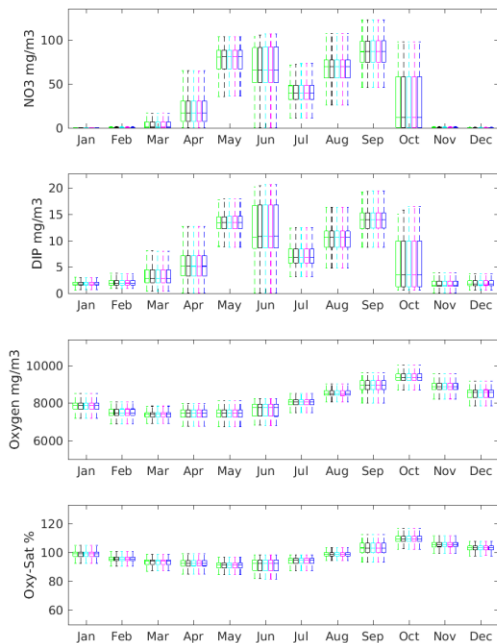
### BG\_9 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



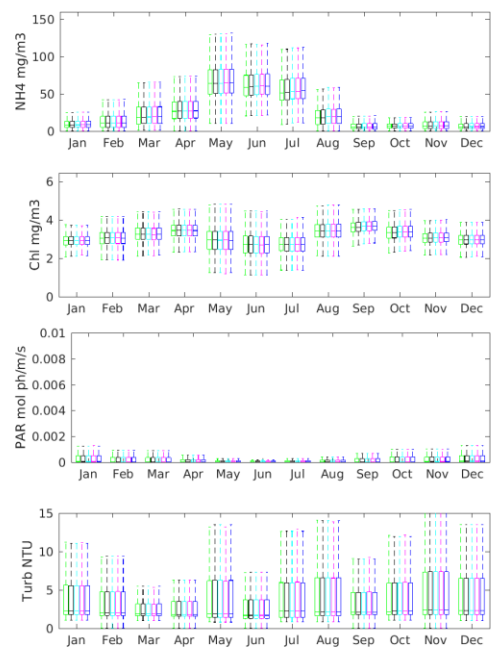
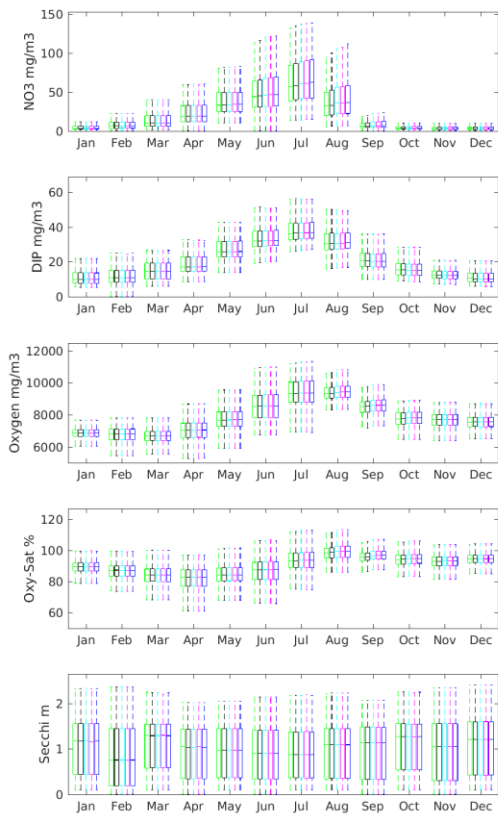
### BG\_10 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



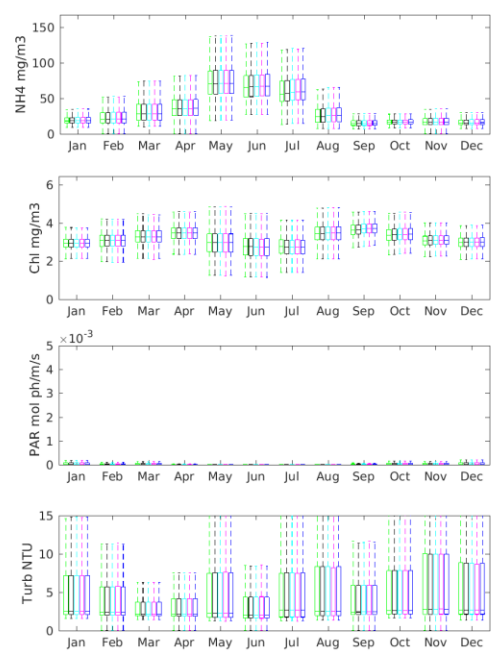
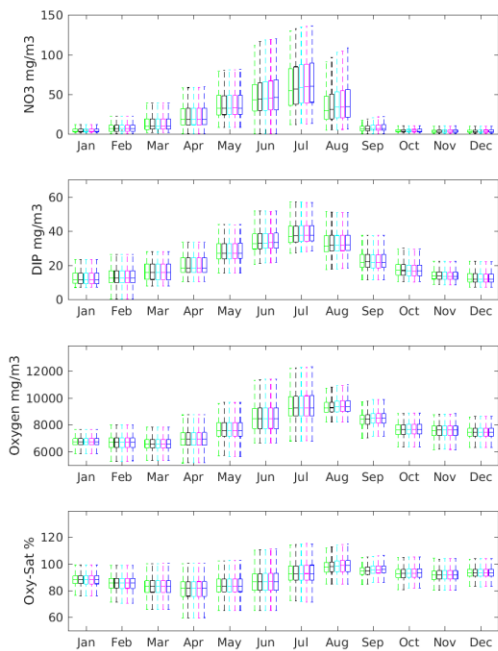
### BG\_10 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



### BG\_11 Surface

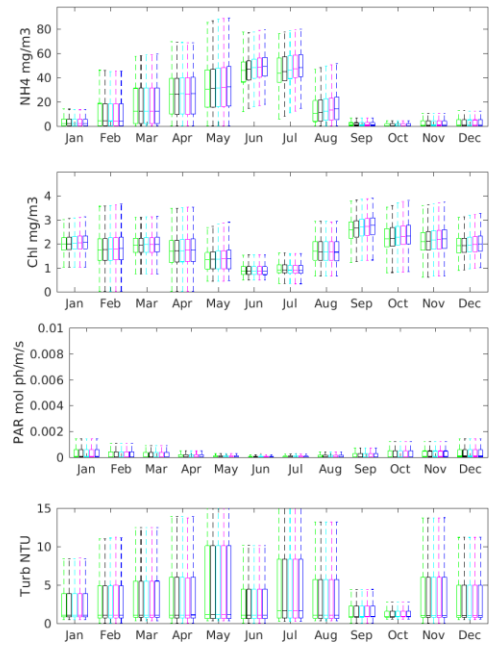
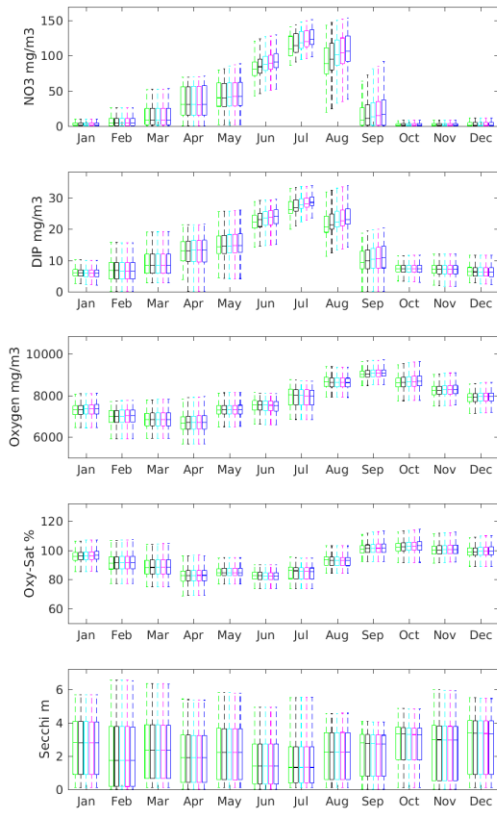
Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



### BG\_11 Bottom

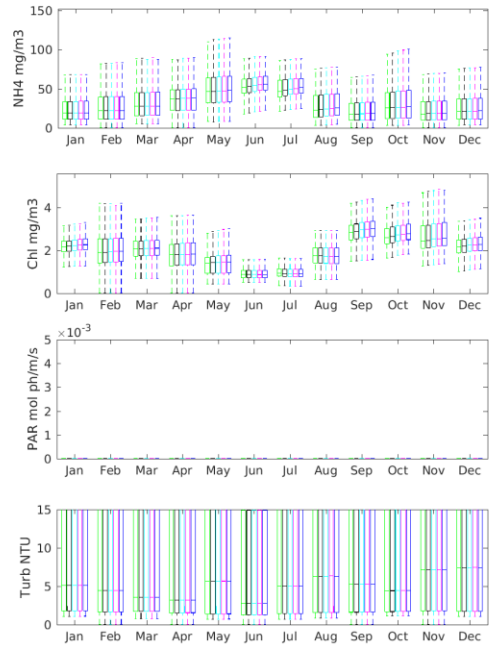
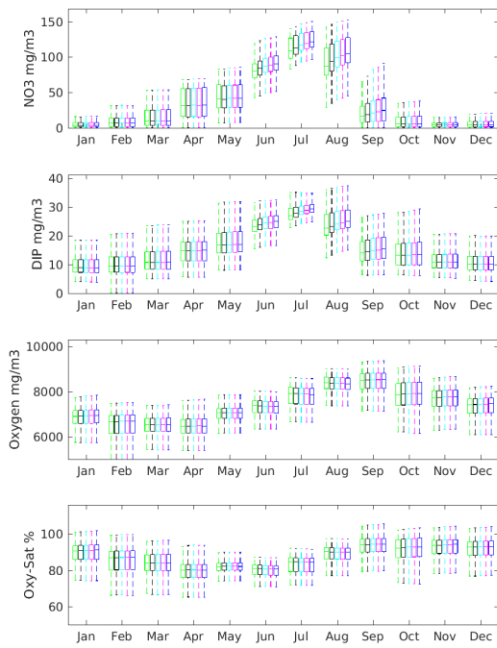
Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB





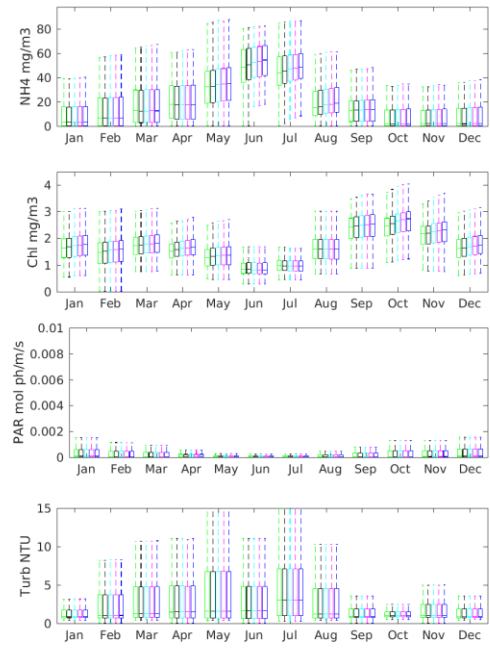
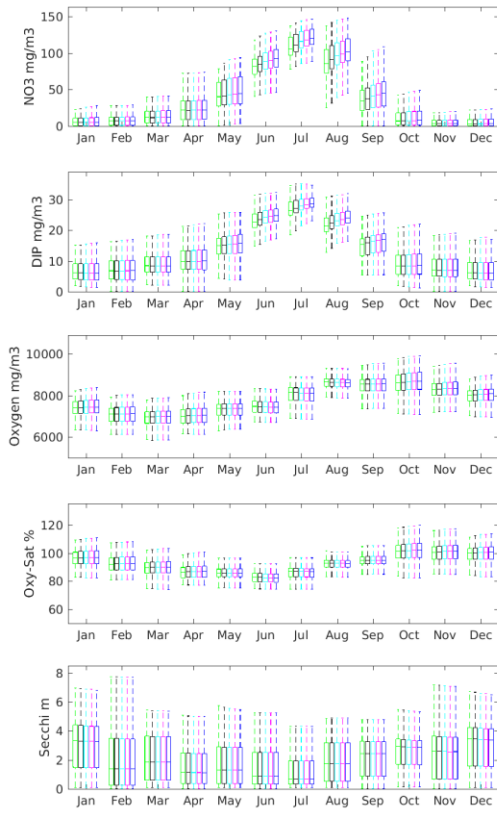
### BG\_8 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



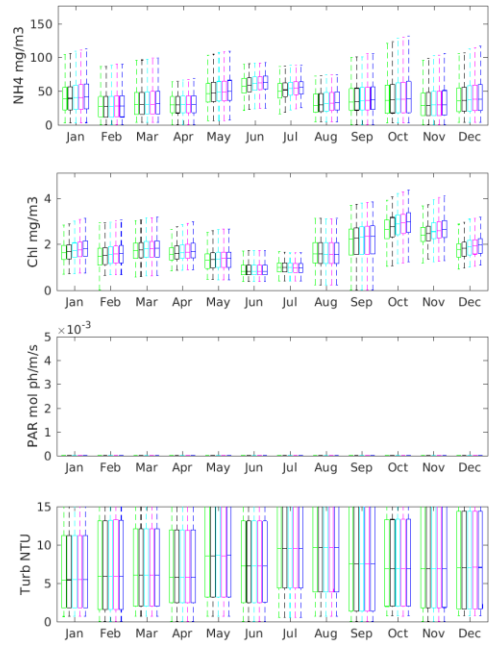
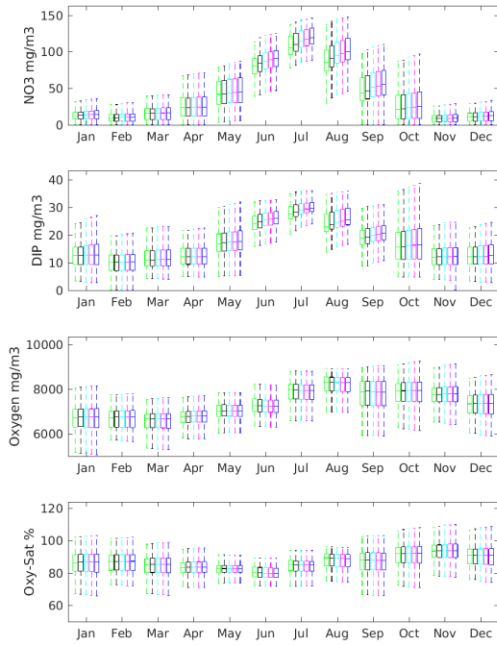
### BG\_8 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



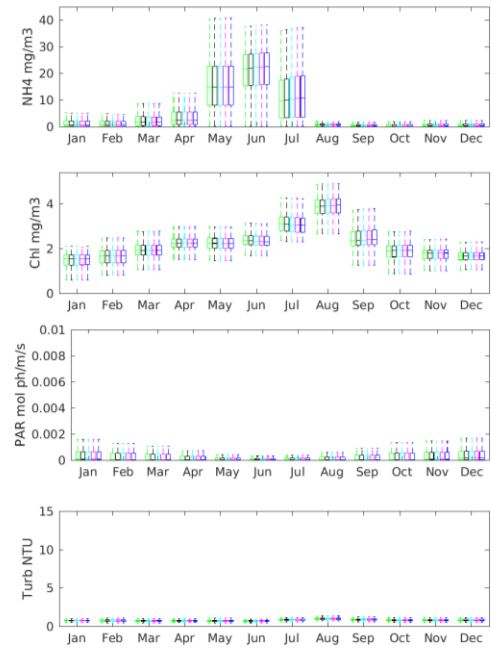
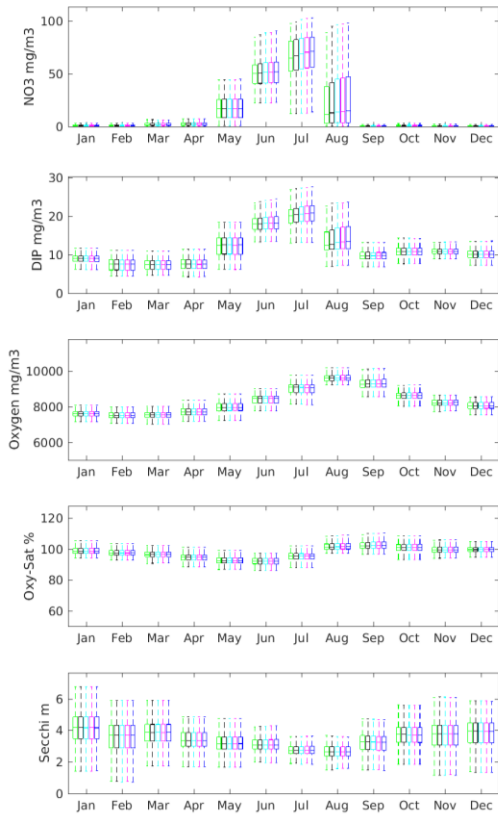
### BG\_7 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



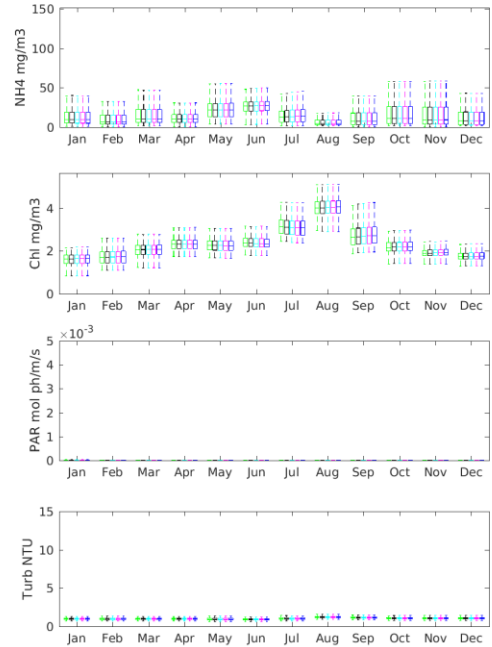
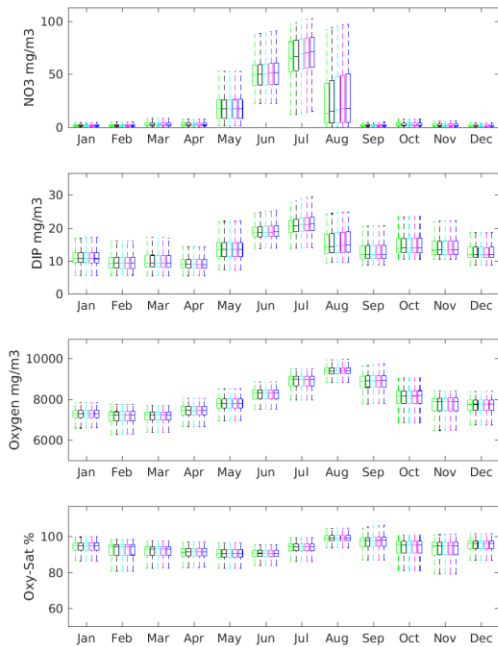
### BG\_7 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



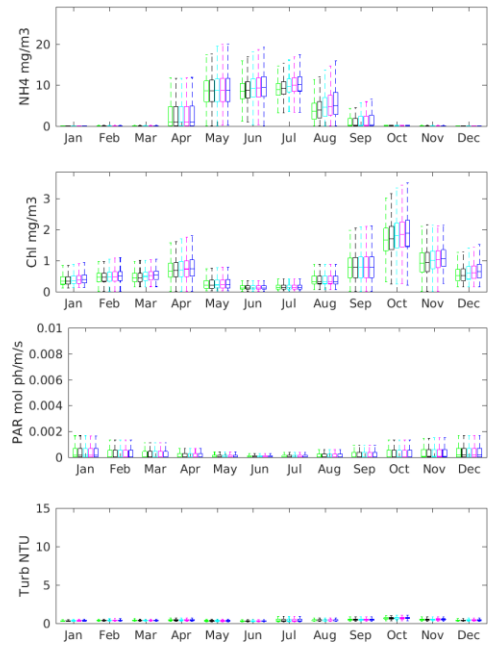
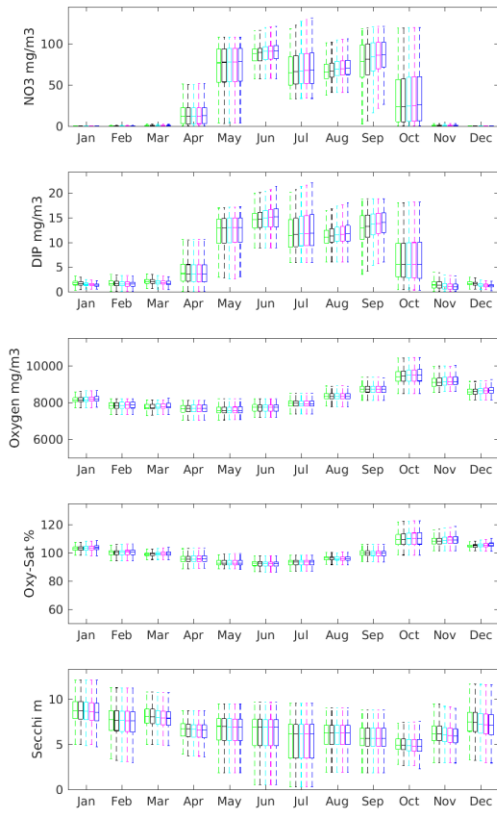
Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB

BG\_6 Surface



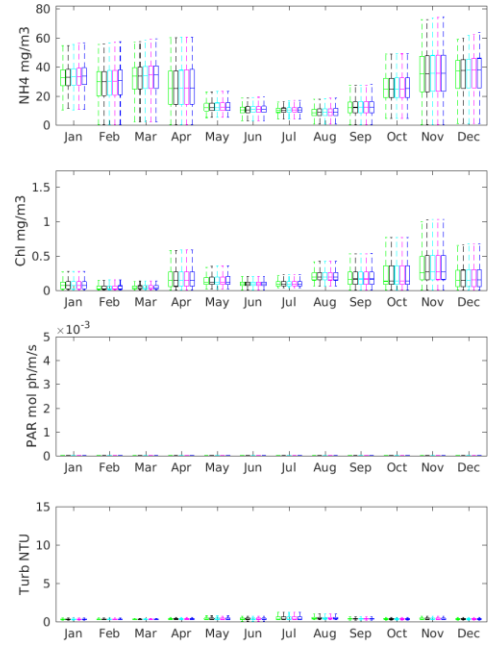
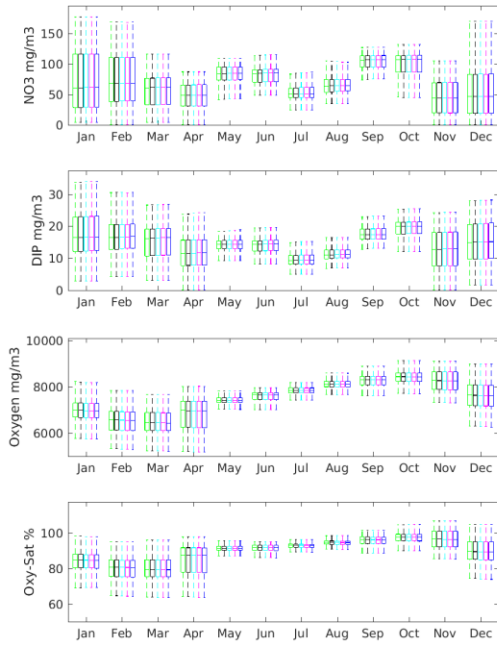
Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB

BG\_6 Bottom



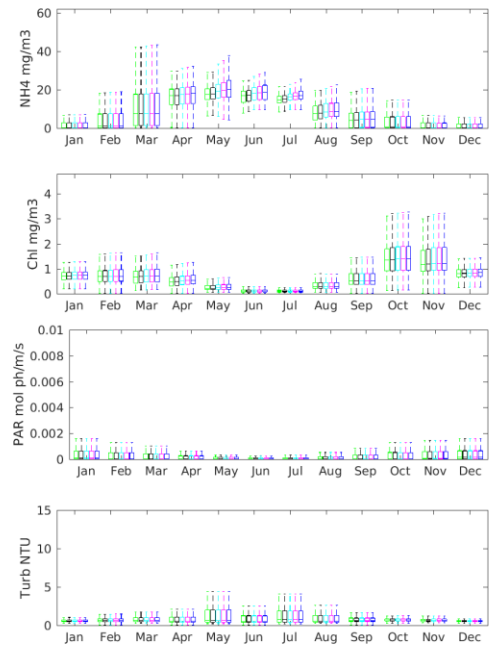
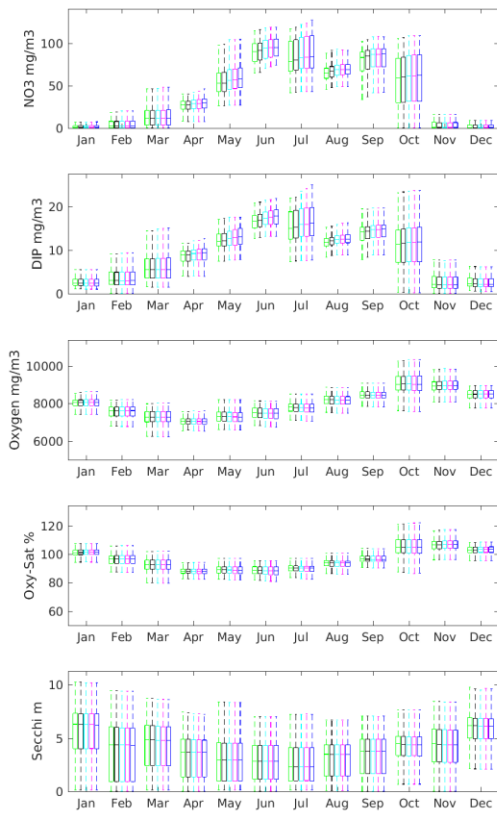
### BG\_5 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



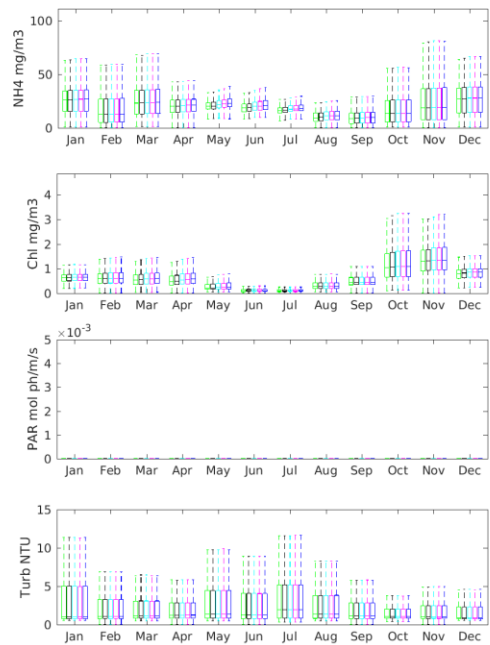
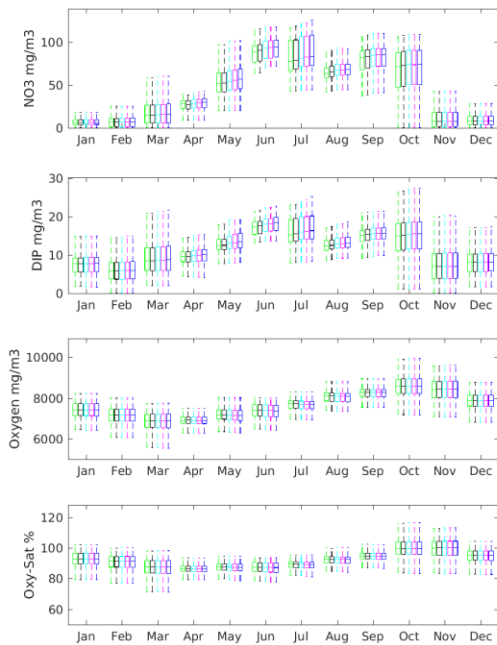
### BG\_5 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



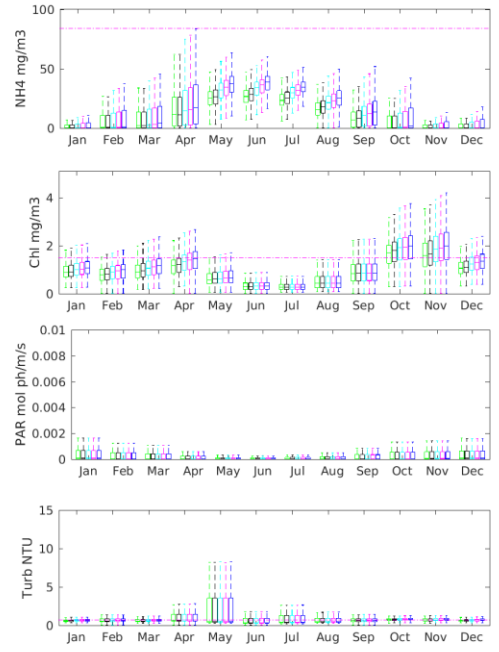
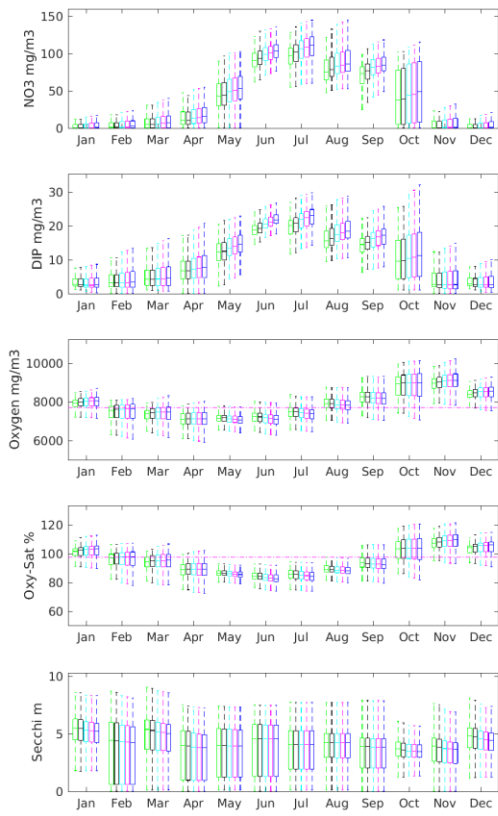
### BG\_4 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



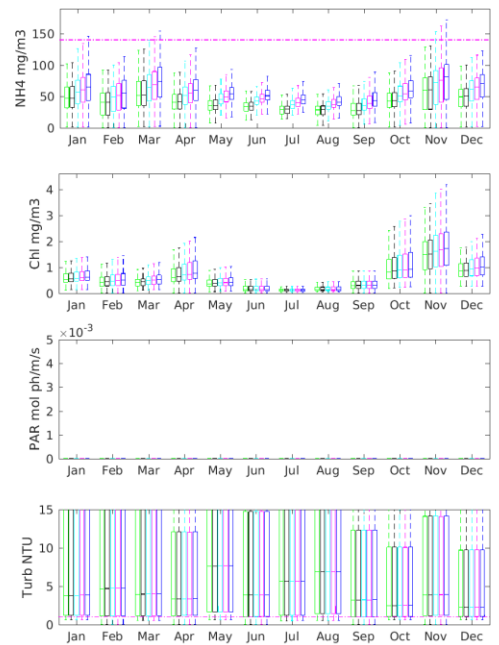
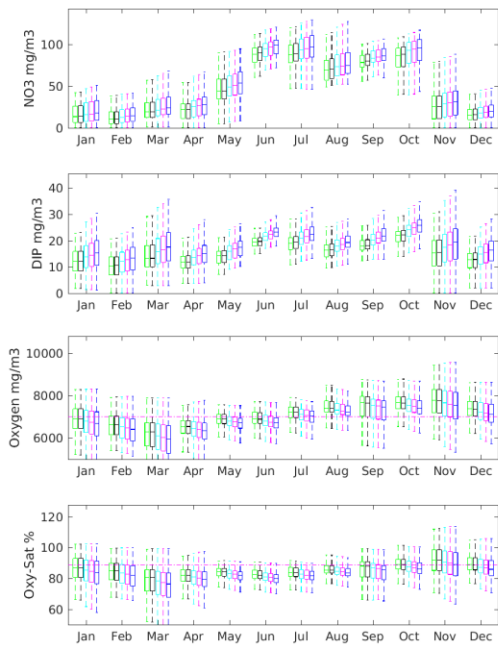
### BG\_4 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



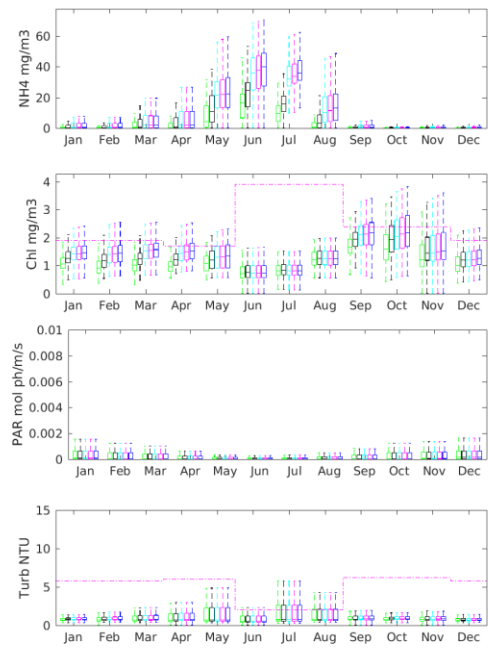
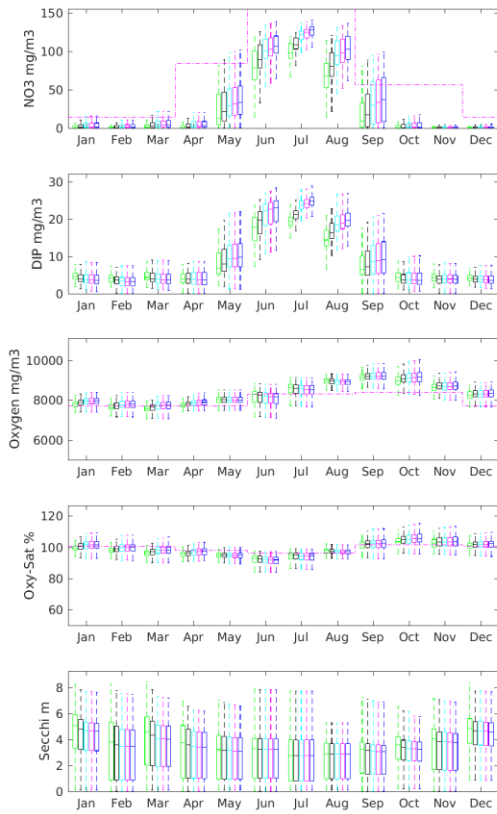
### YellowB\_SB3 Surface

- Pre Develop
- Pre SB Develop
- 2020+2ktN in SB
- 2020+3ktN in SB
- 2020+4.5ktN in SB



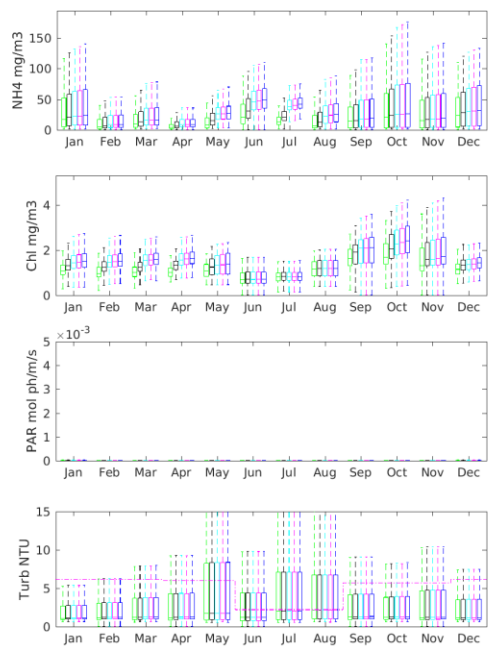
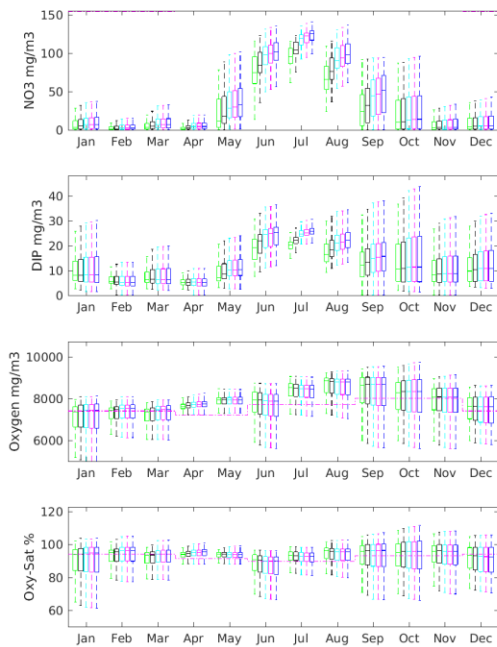
### YellowB\_SB3 Bottom

- Pre Develop
- Pre SB Develop
- 2020+2ktN in SB
- 2020+3ktN in SB
- 2020+4.5ktN in SB



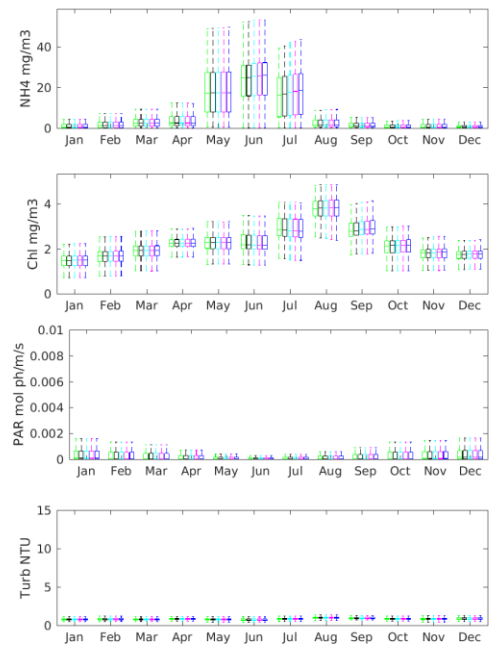
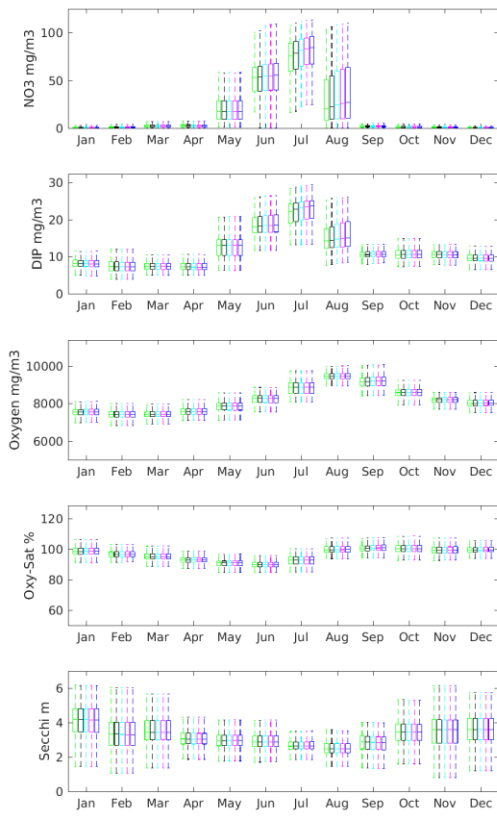
### Whiteb Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



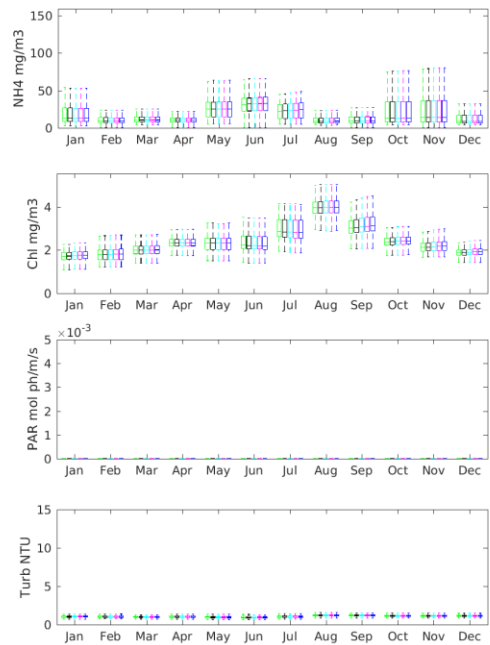
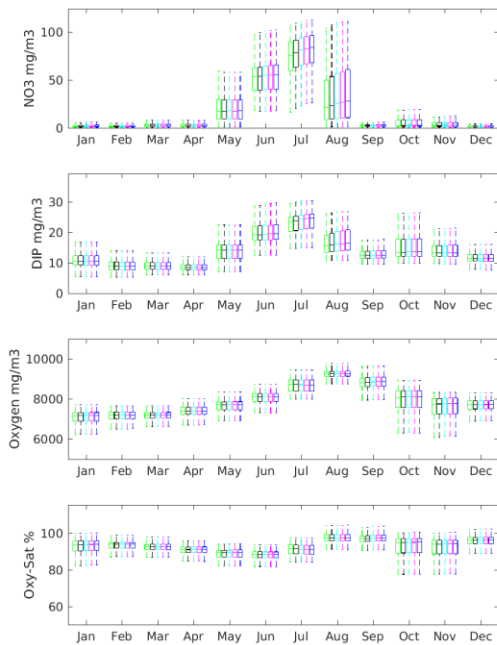
### Whiteb Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB

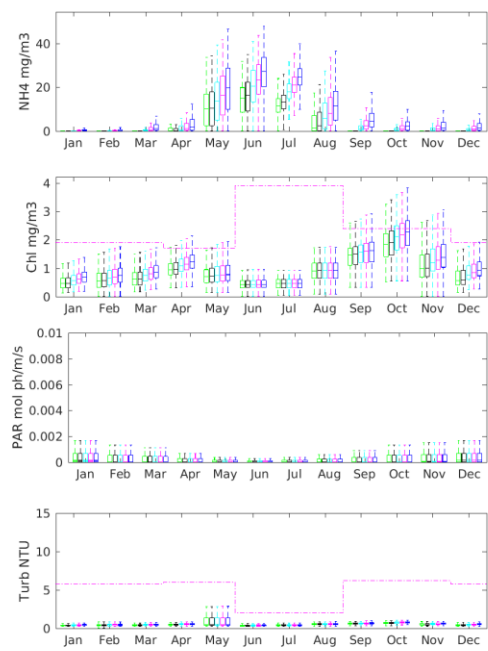
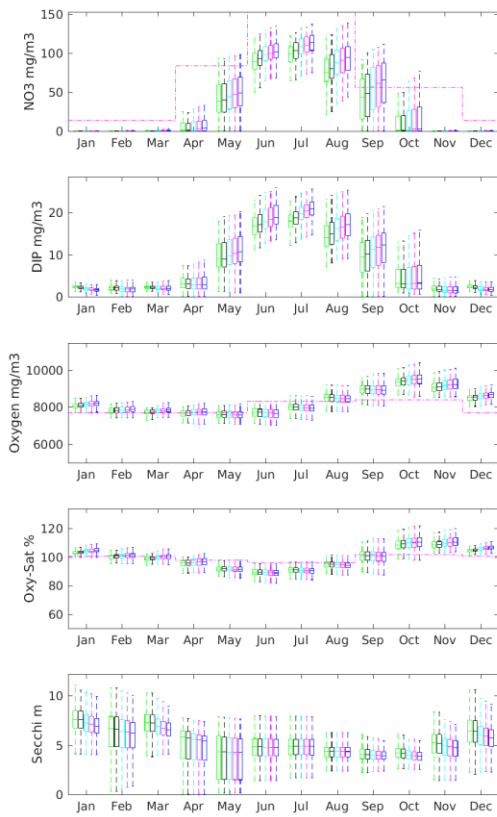
## White Surface



Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB

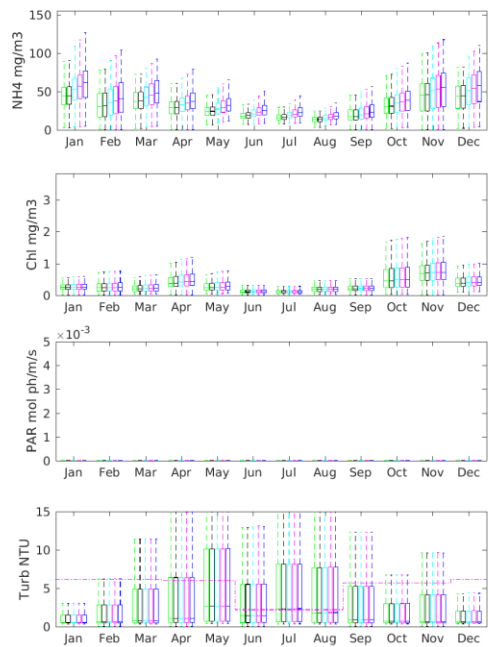
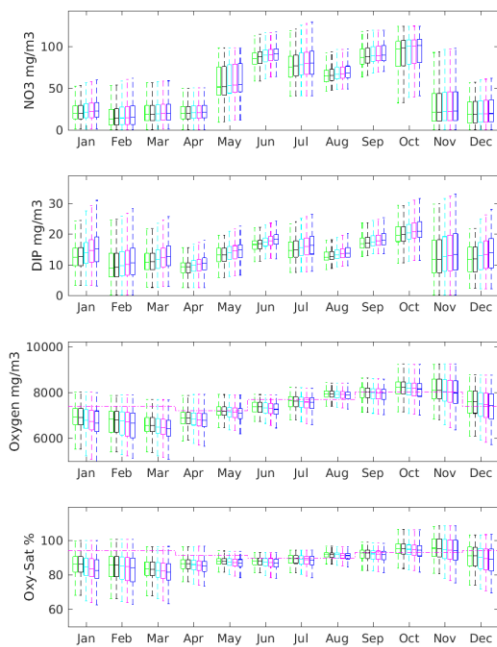
## White Bottom





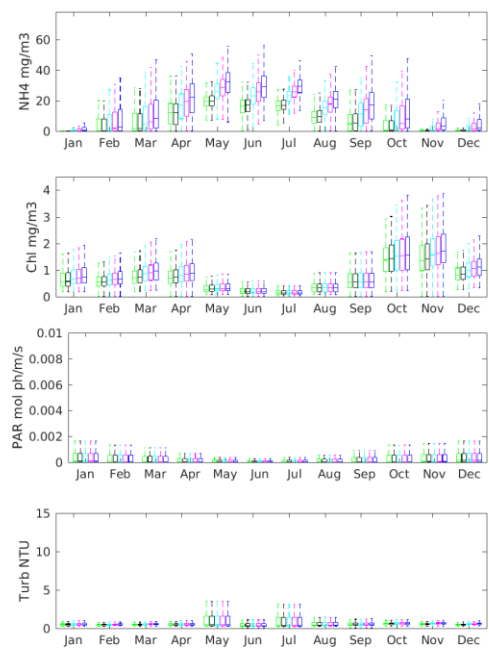
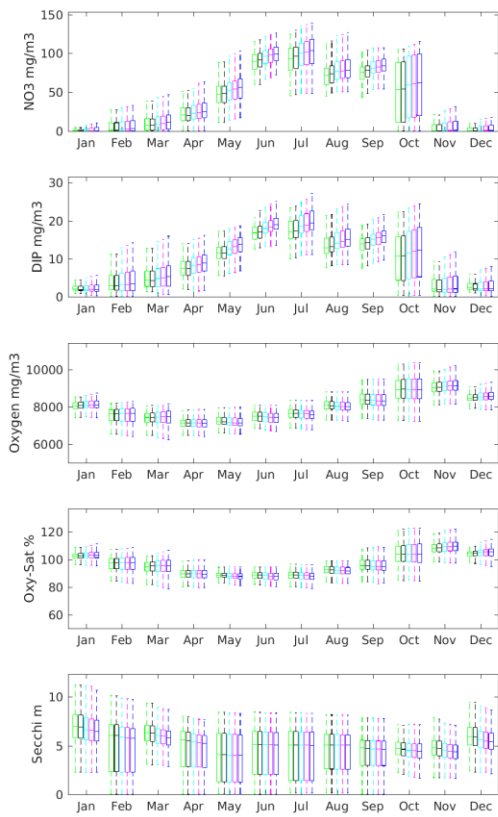
### Wedge Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



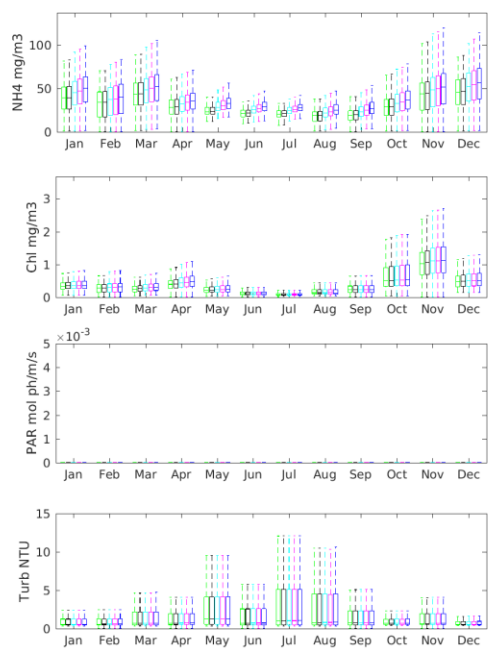
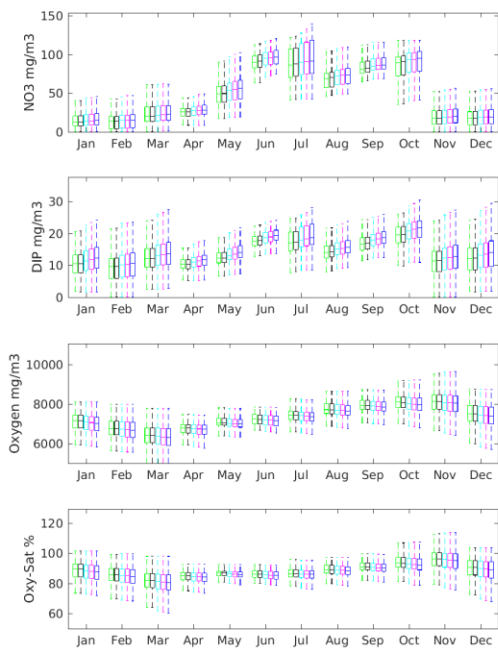
### Wedge Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



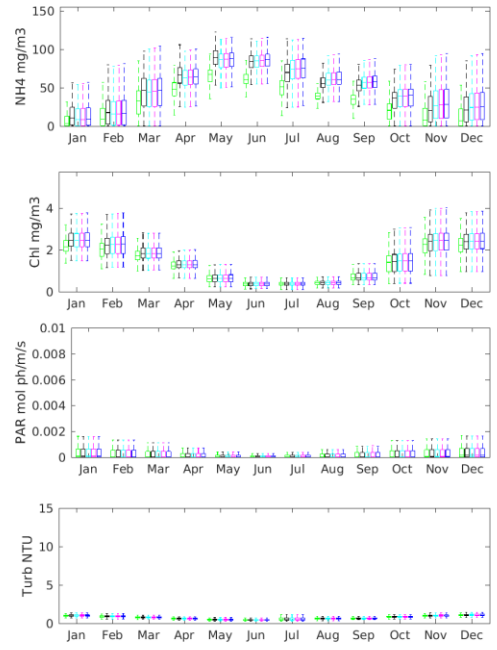
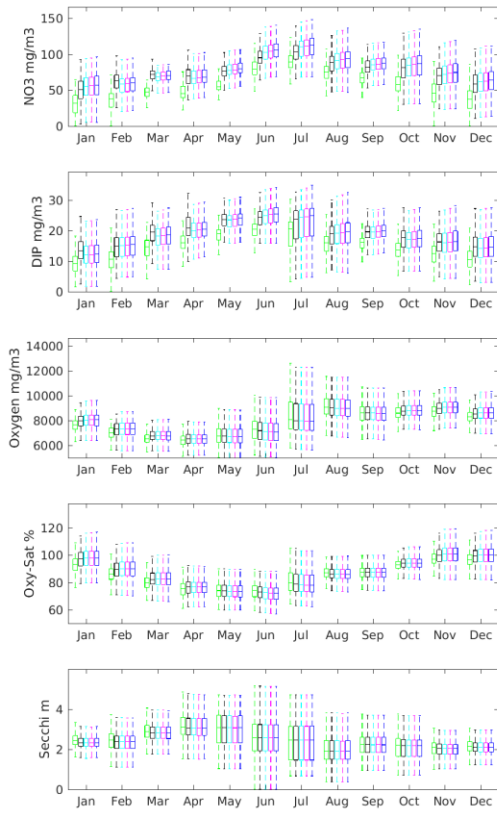
### VarietyP\_SB11 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



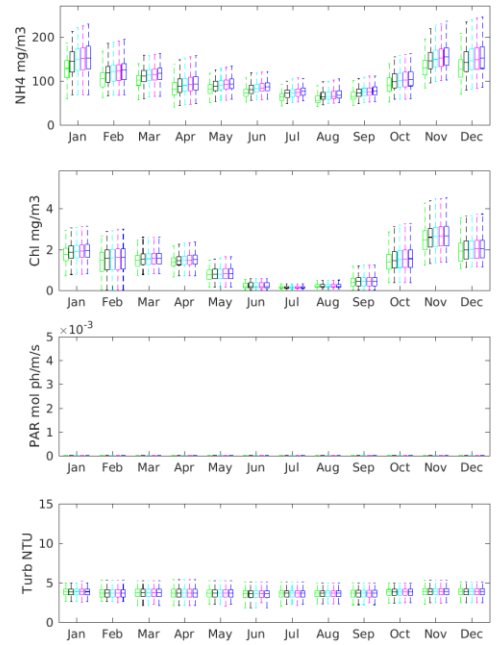
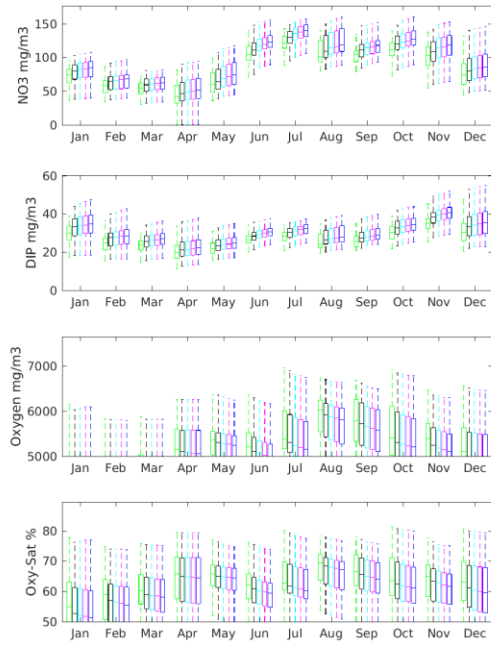
### VarietyP\_SB11 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



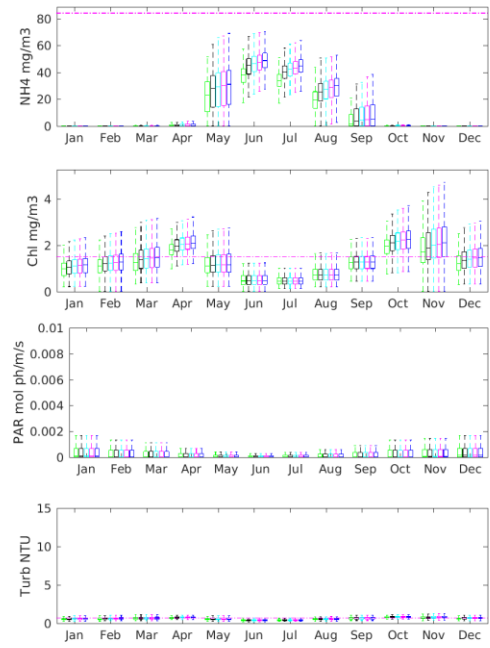
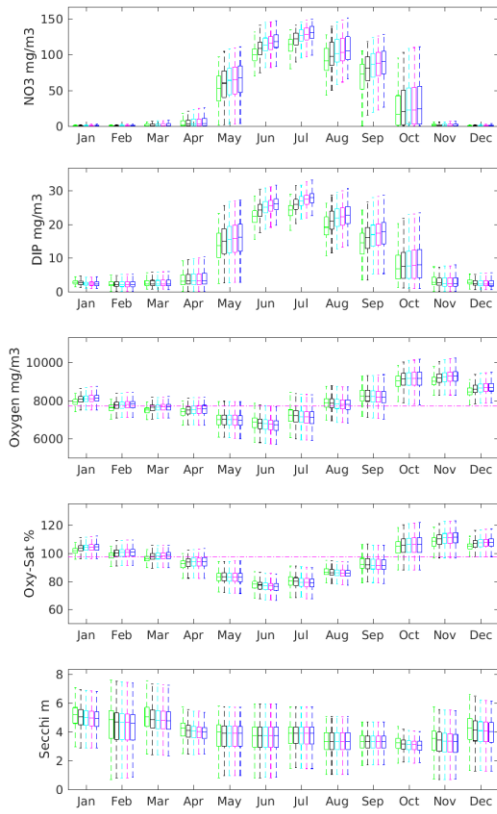
### U2 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



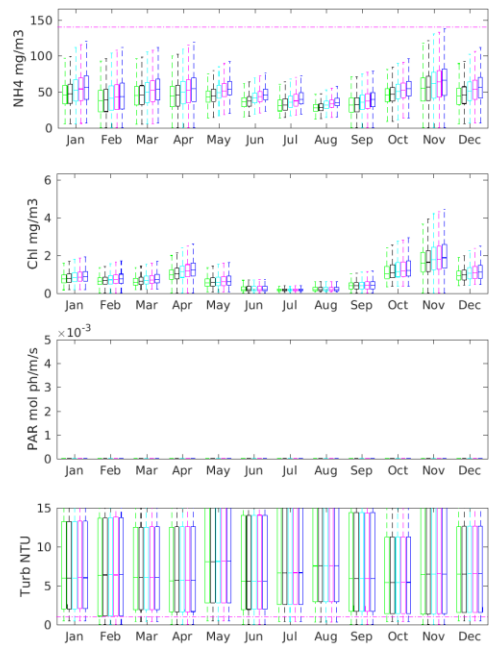
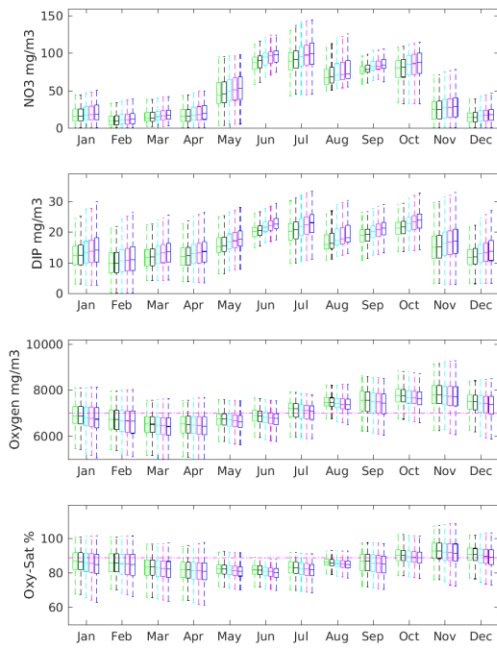
### U2 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



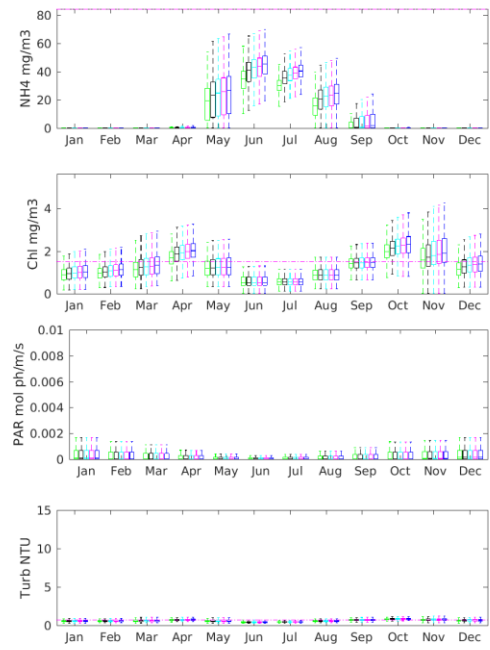
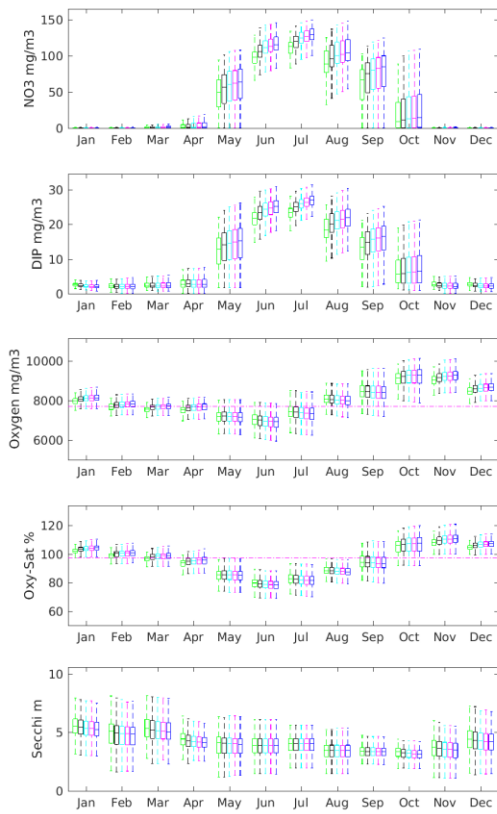
### SWIron\_SB1 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



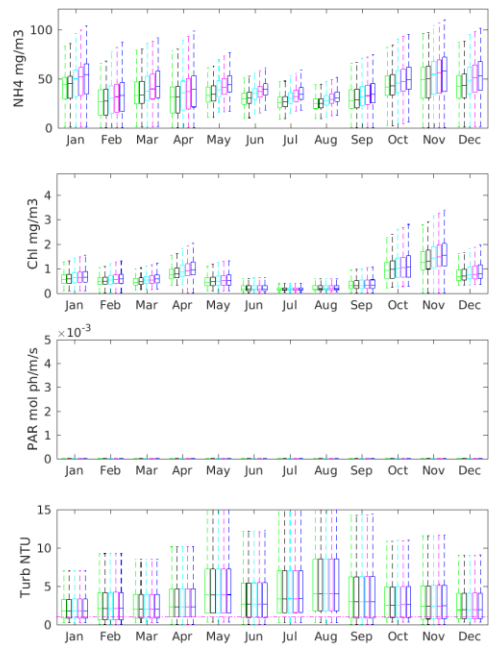
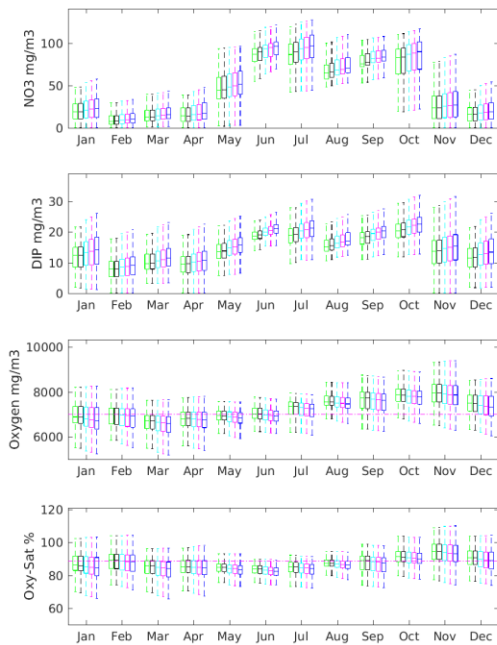
### SWIron\_SB1 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



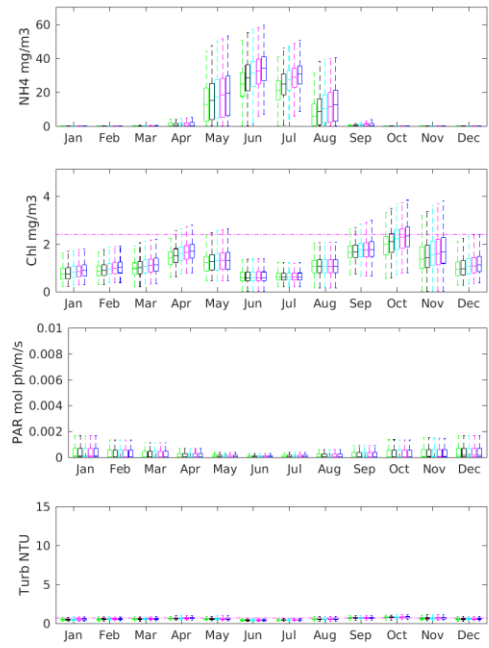
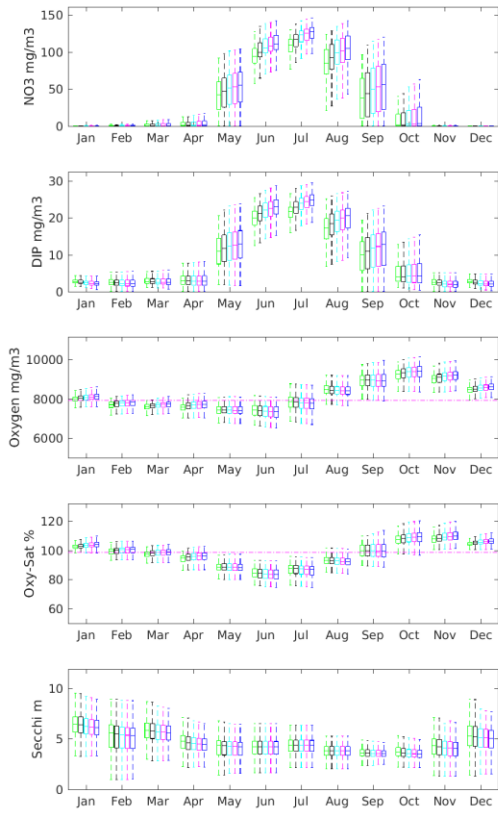
SWBetsy\_SB12 Surface

- Pre Develop
- Pre SB Develop
- 2020+2ktN in SB
- 2020+3ktN in SB
- 2020+4.5ktN in SB



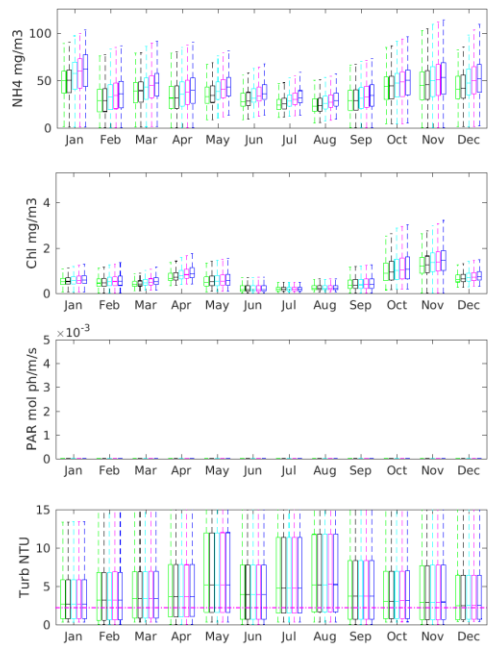
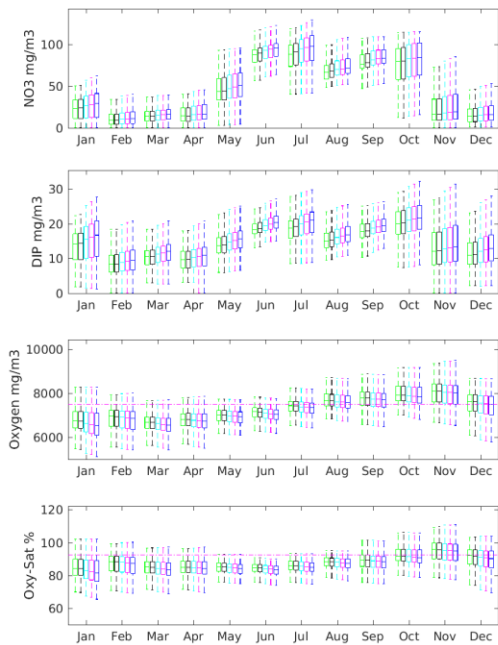
SWBetsy\_SB12 Bottom

- Pre Develop
- Pre SB Develop
- 2020+2ktN in SB
- 2020+3ktN in SB
- 2020+4.5ktN in SB



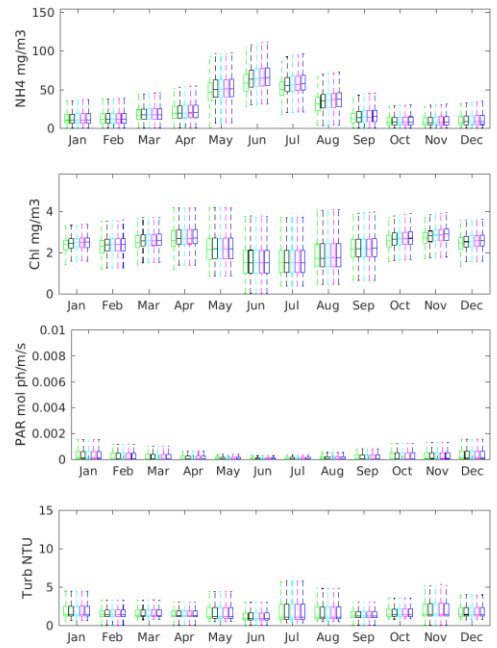
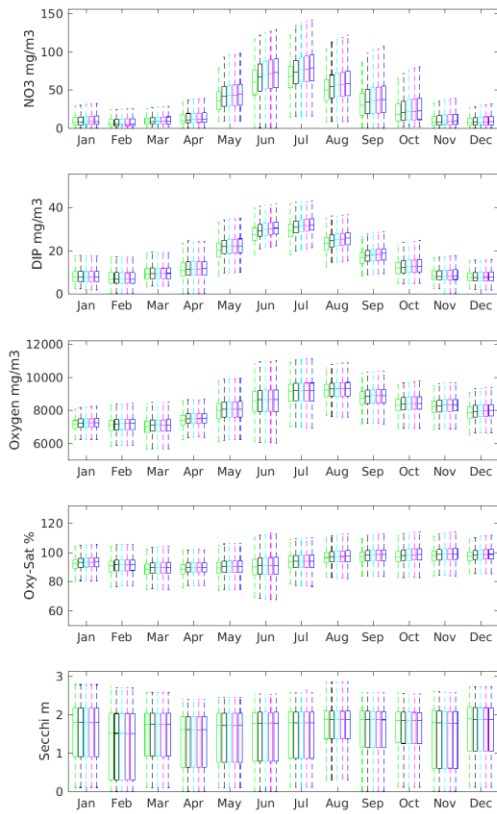
### SEBetsey\_SB8 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



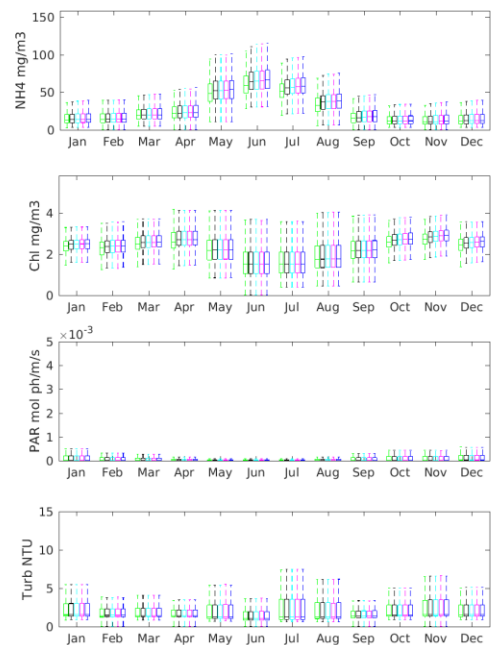
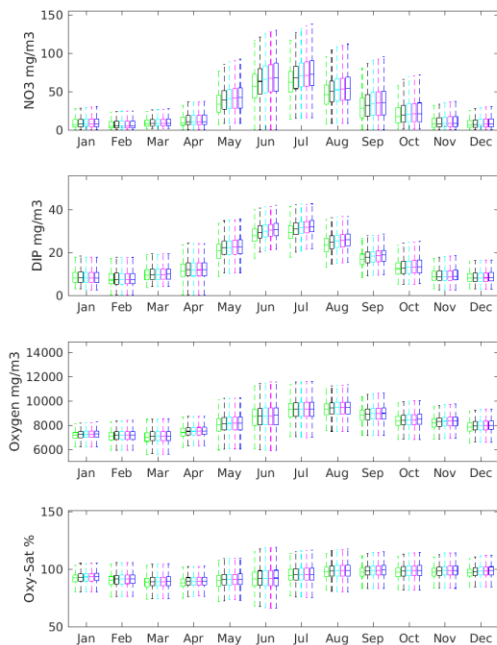
### SEBetsey\_SB8 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



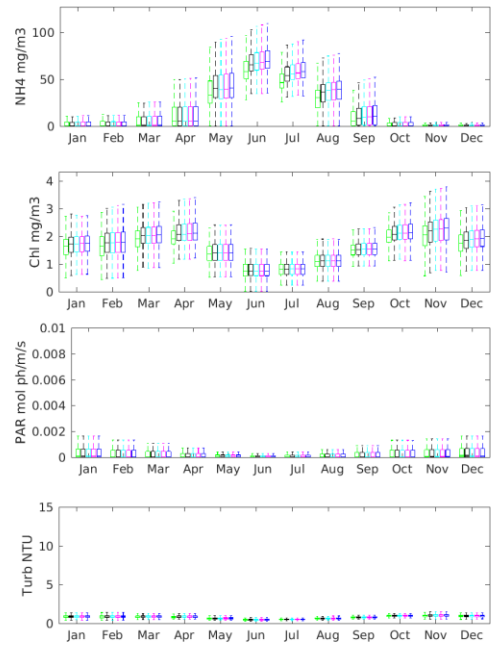
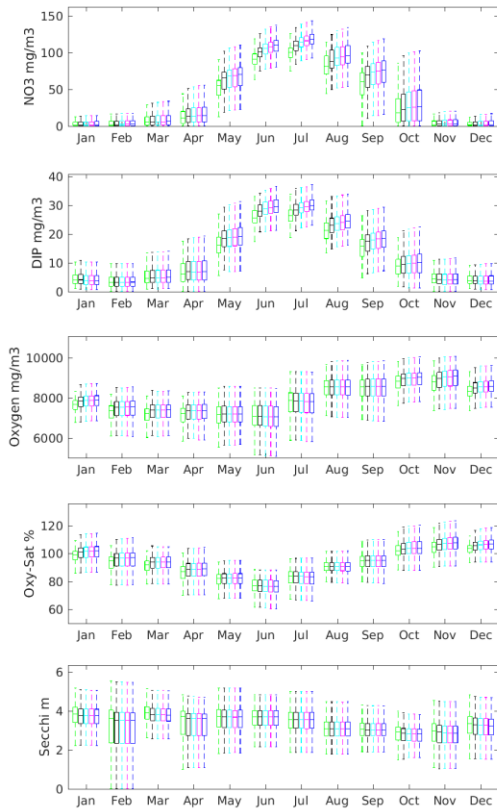
### RBS Surface

- Pre Develop
- Pre SB Develop
- 2020+2ktN in SB
- 2020+3ktN in SB
- 2020+4.5ktN in SB



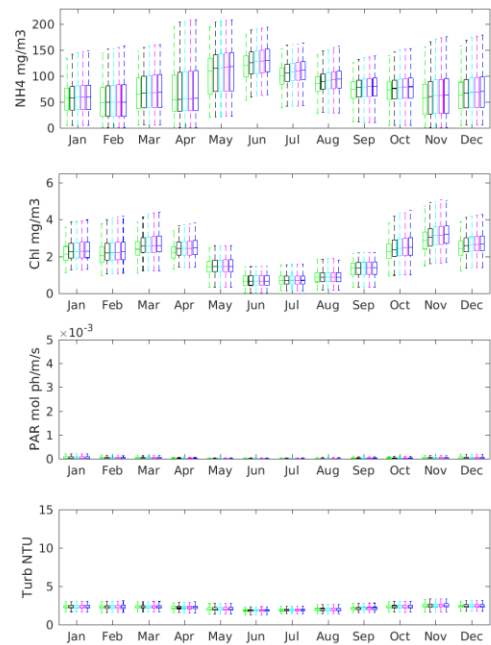
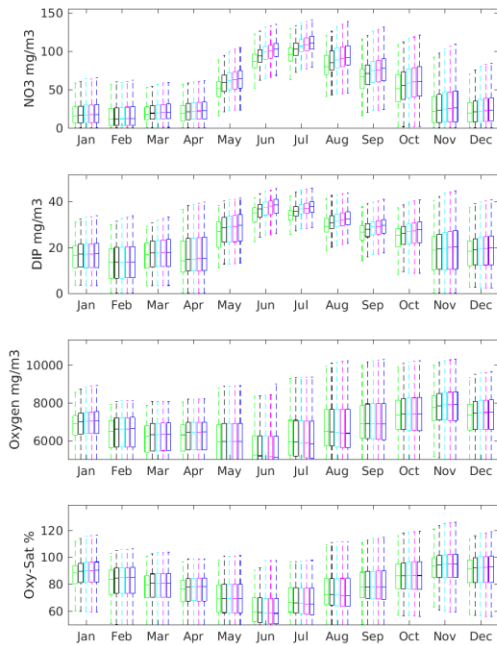
### RBS Bottom

- Pre Develop
- Pre SB Develop
- 2020+2ktN in SB
- 2020+3ktN in SB
- 2020+4.5ktN in SB



### RBN Surface

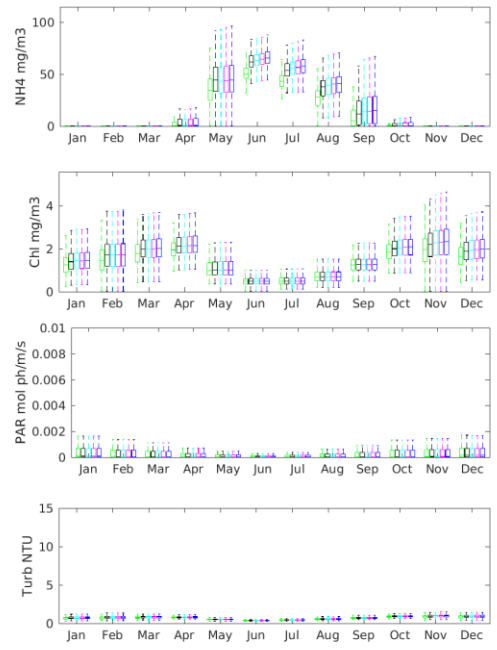
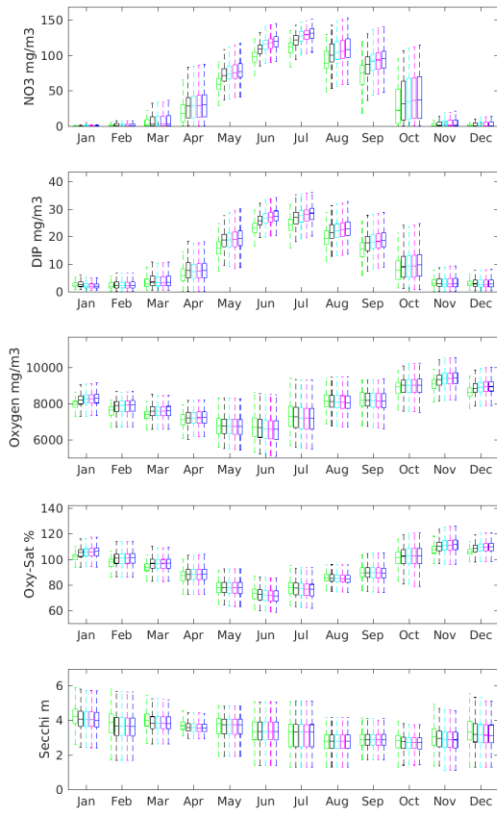
Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



### RBN Bottom

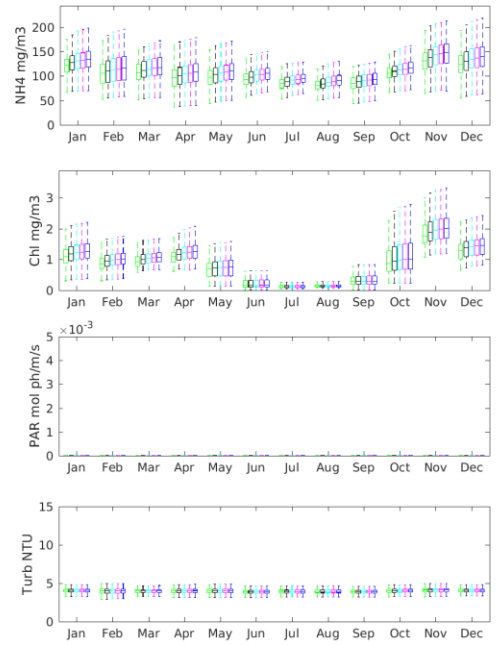
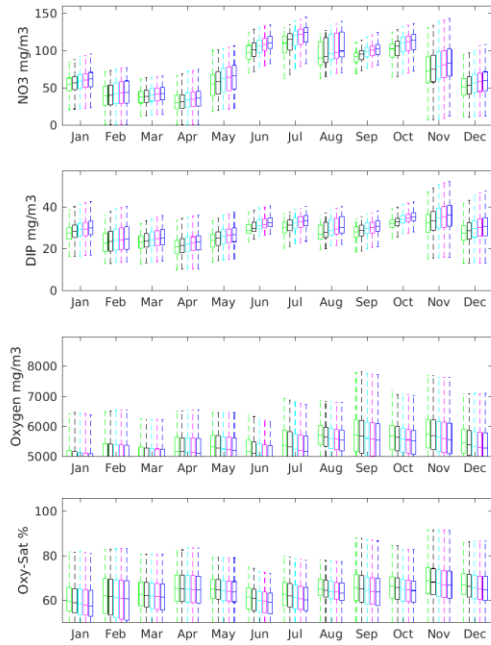
Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB





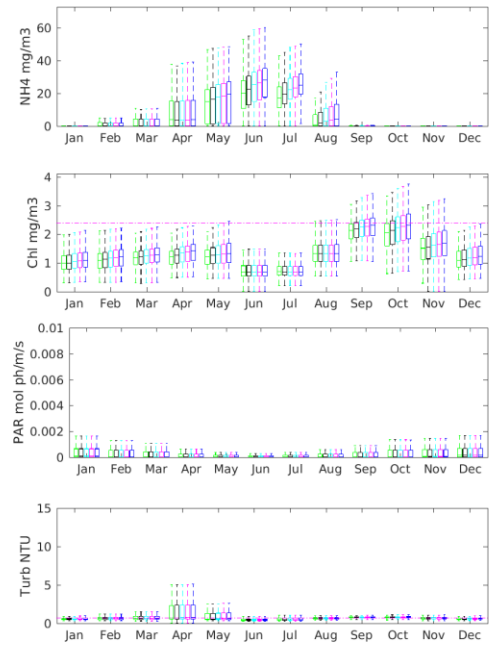
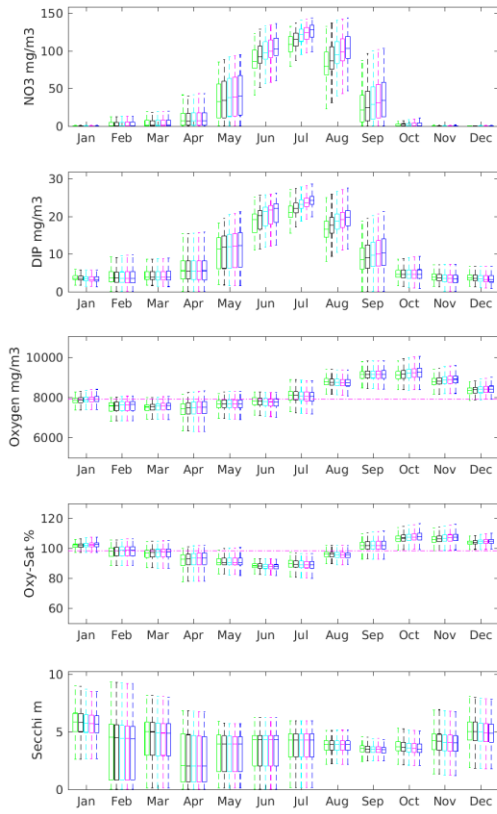
### RB Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



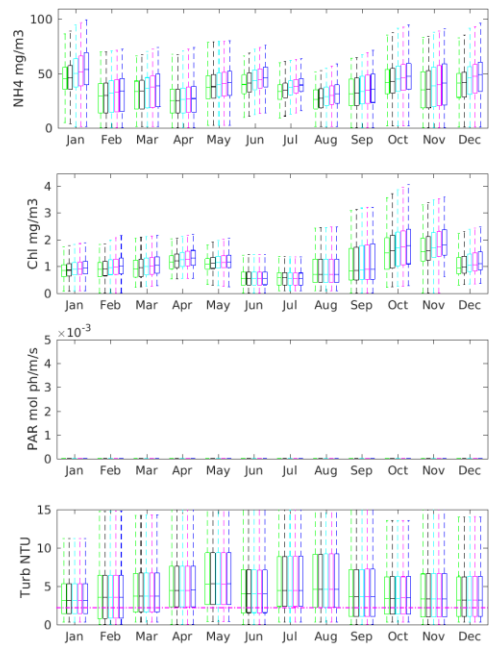
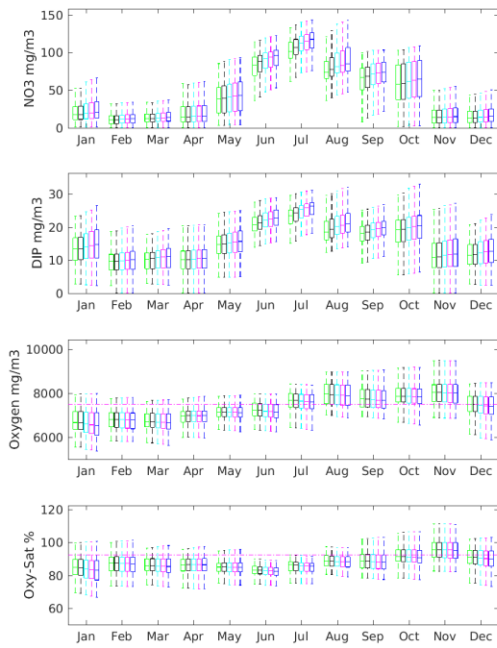
### RB Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



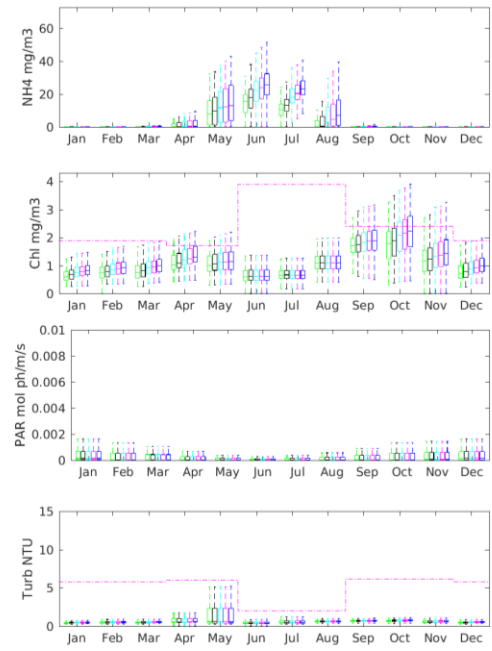
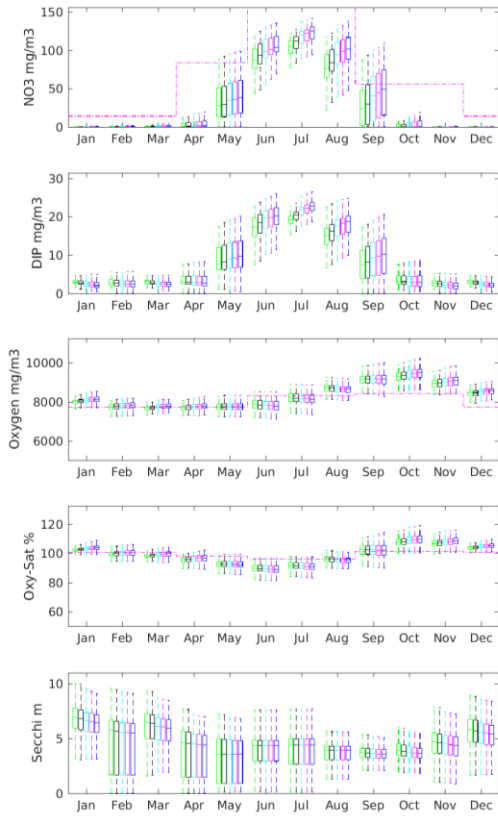
NWHead\_SB9 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



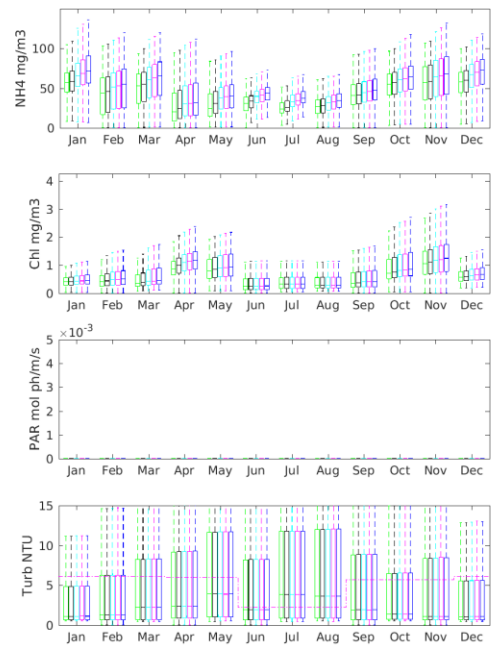
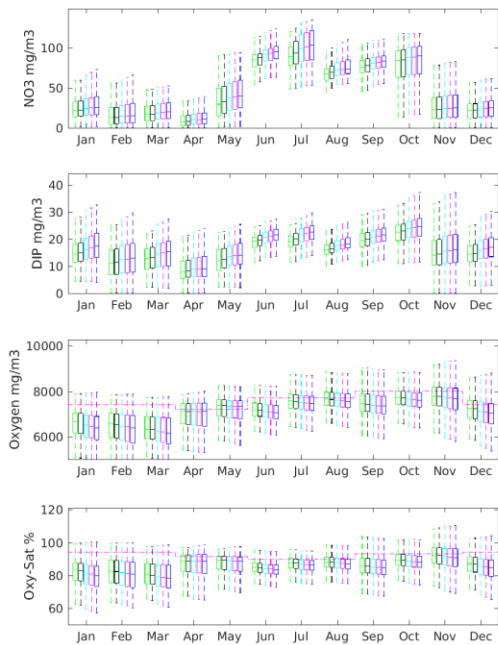
NWHead\_SB9 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



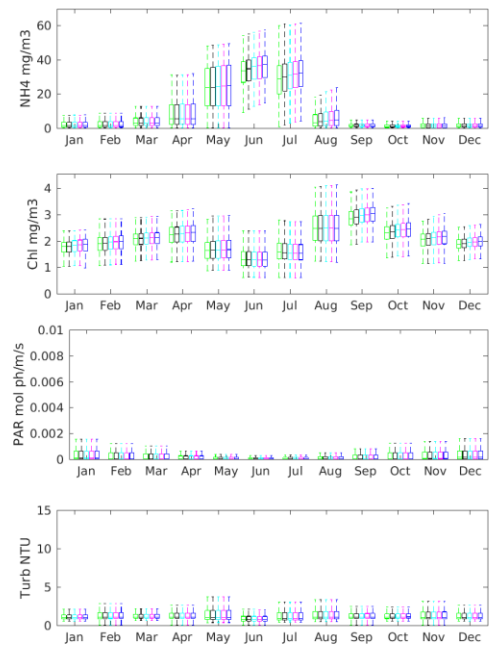
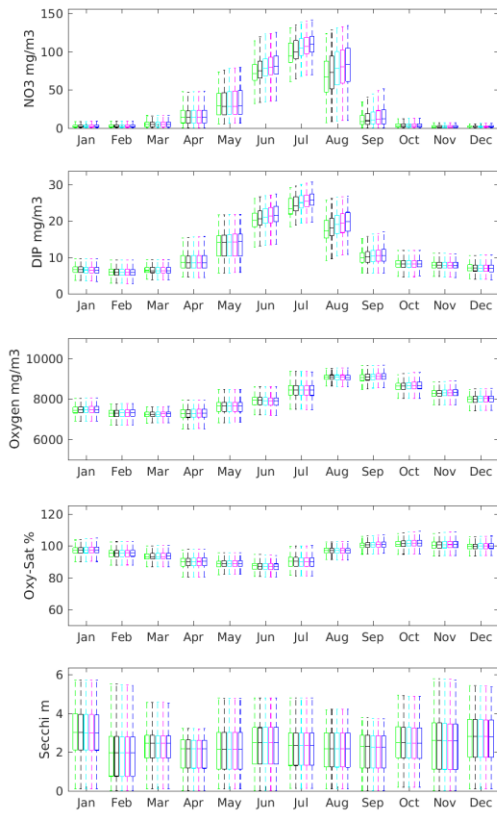
NWedge\_SB5 Surface

- Pre Develop
- Pre SB Develop
- 2020+2ktN in SB
- 2020+3ktN in SB
- 2020+4.5ktN in SB



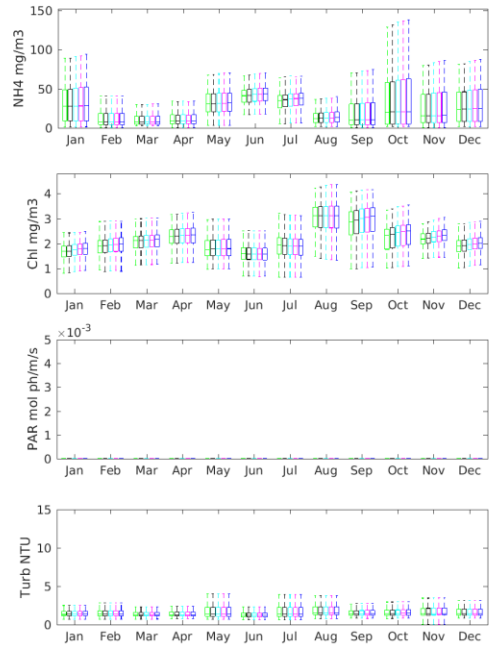
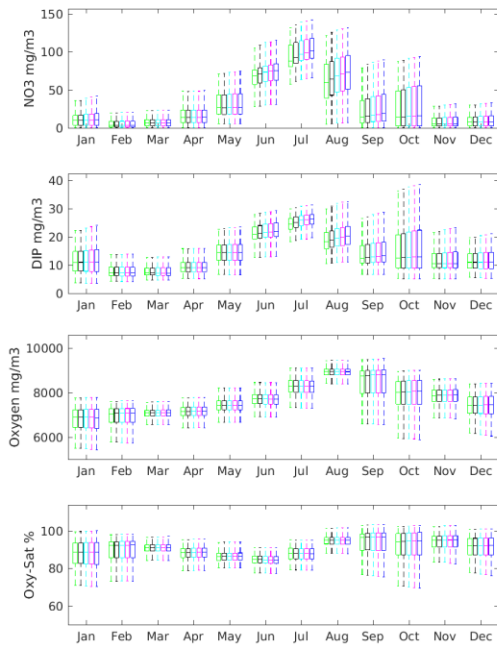
NWedge\_SB5 Bottom

- Pre Develop
- Pre SB Develop
- 2020+2ktN in SB
- 2020+3ktN in SB
- 2020+4.5ktN in SB



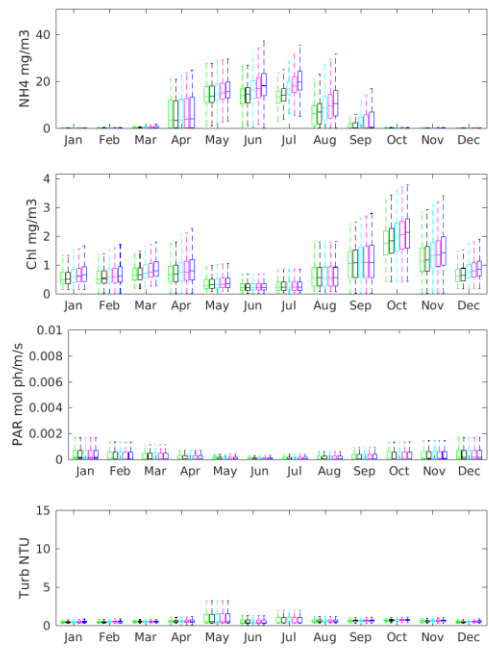
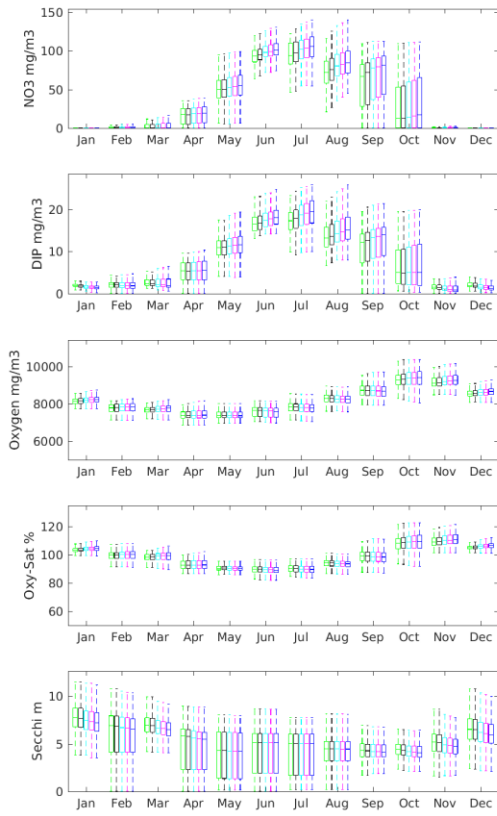
### NGreen\_W Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



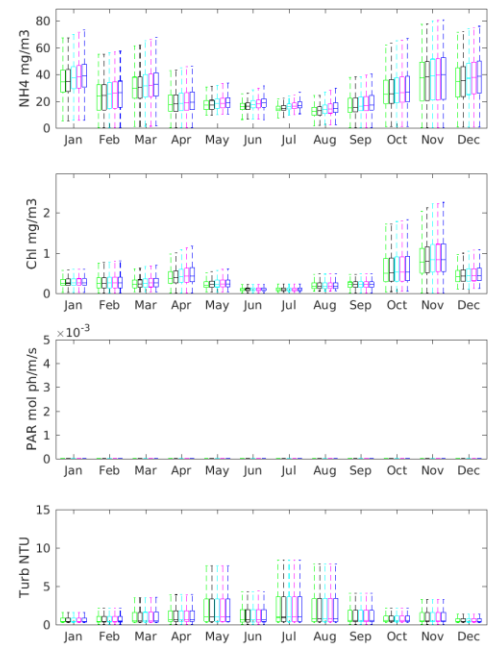
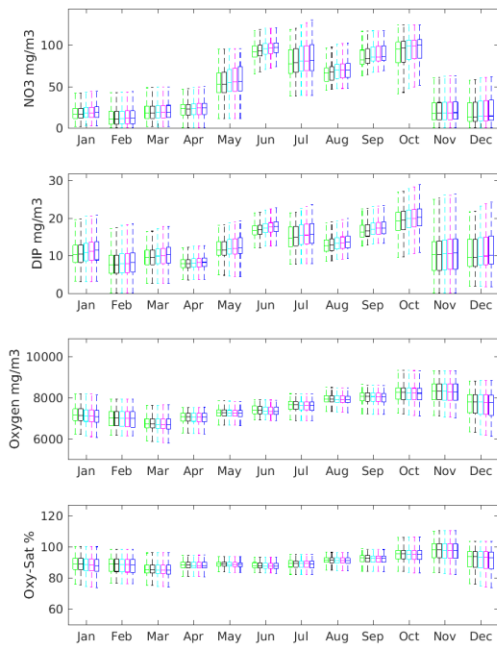
### NGreen\_W Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



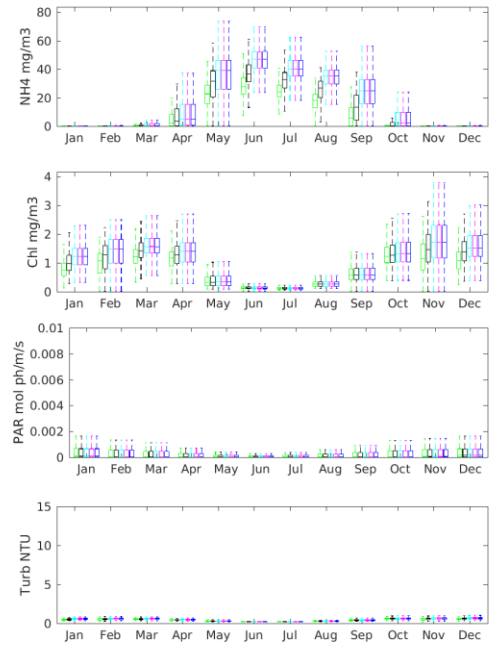
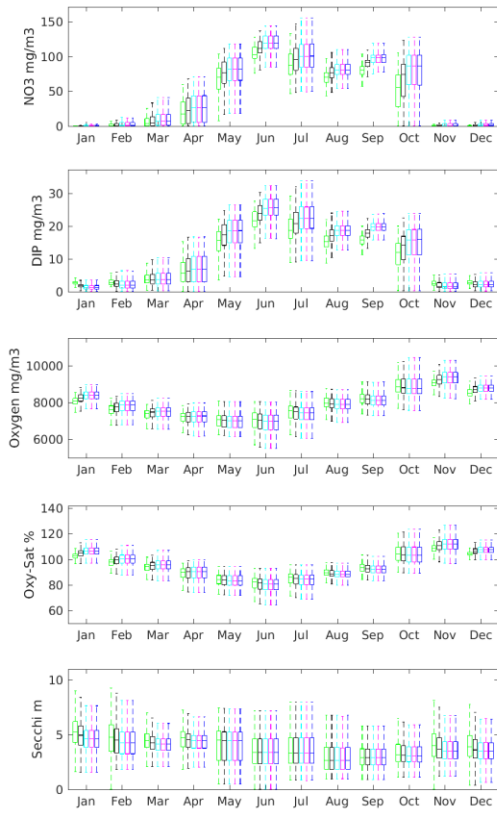
### MidSB\_SB2 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



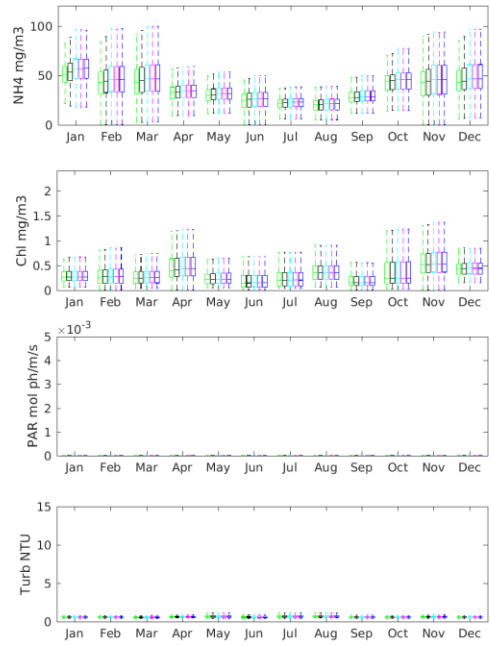
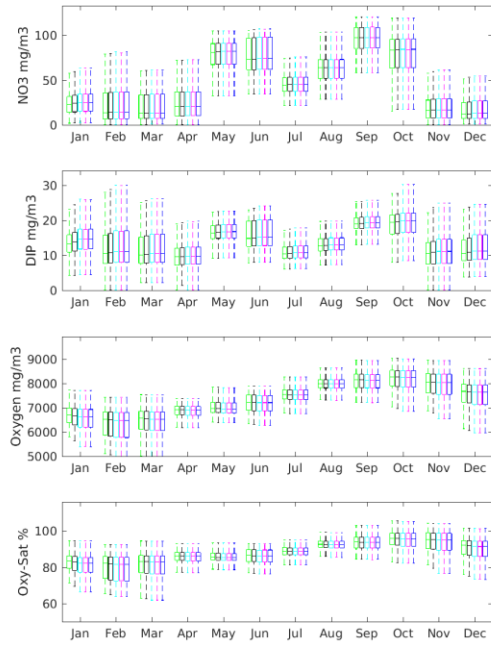
### MidSB\_SB2 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



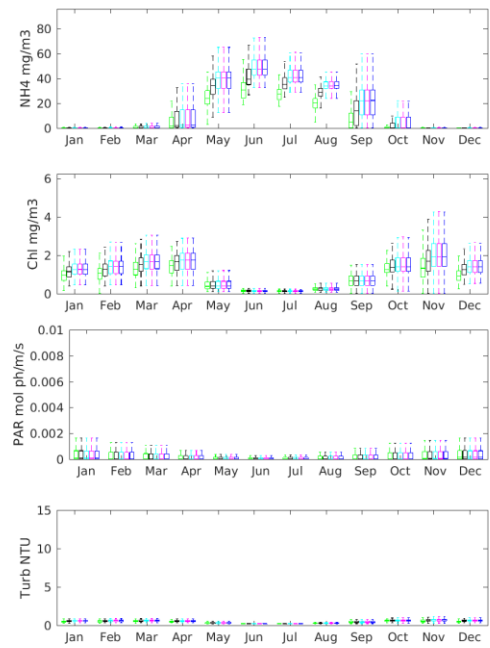
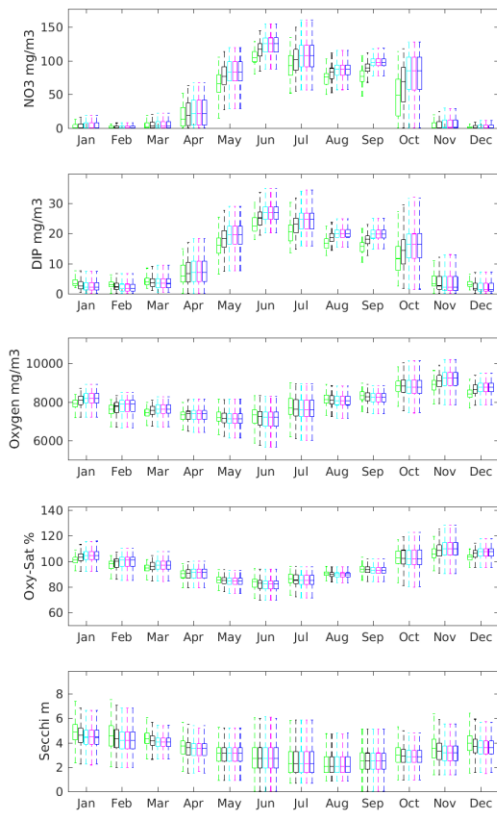
### M9 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



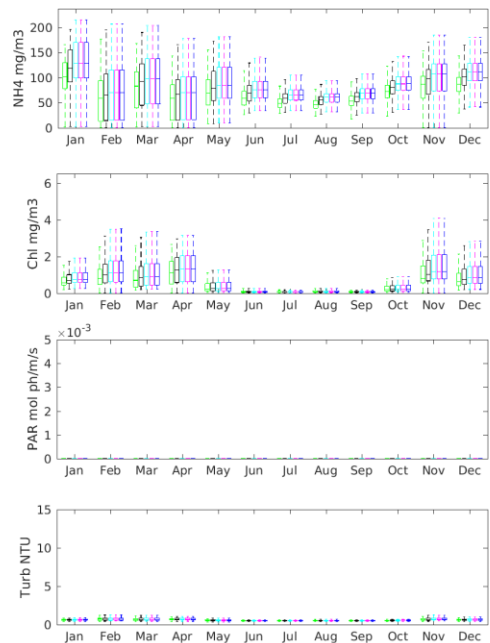
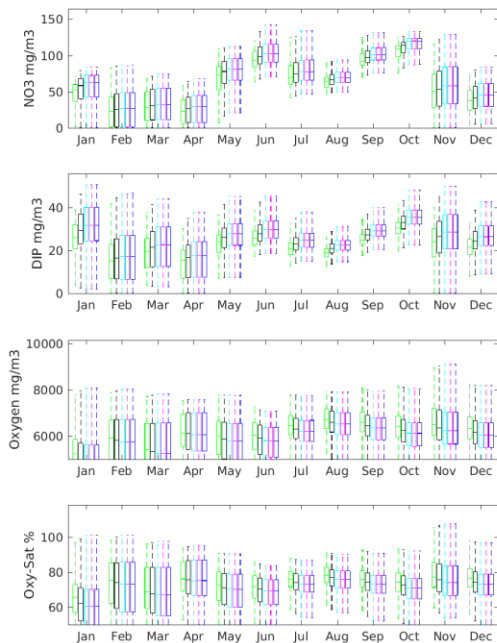
### M9 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



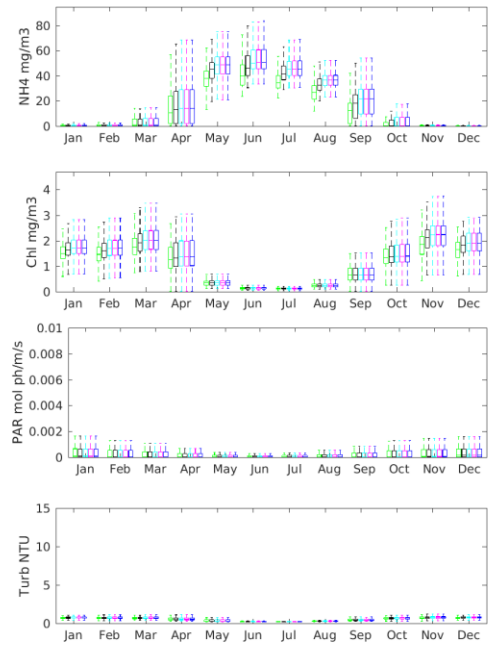
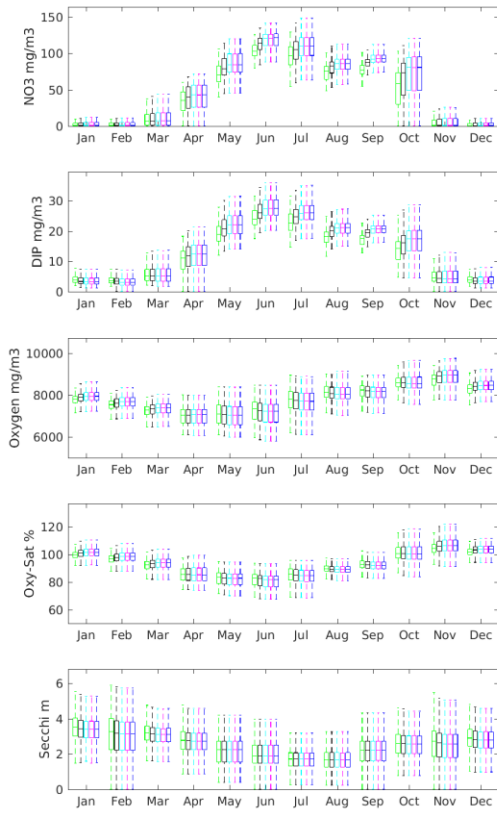
### M8 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



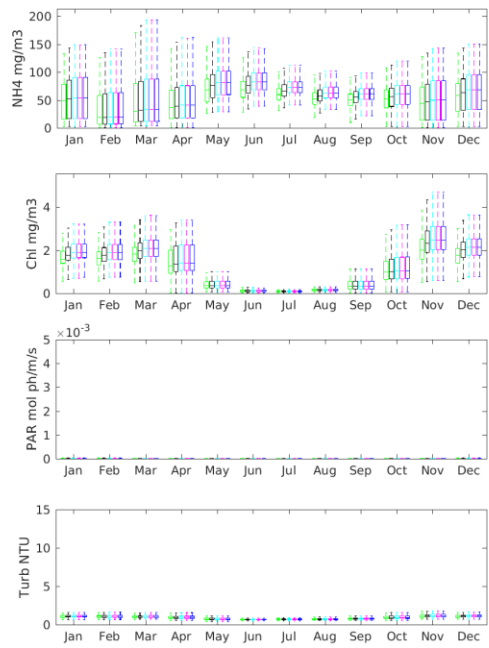
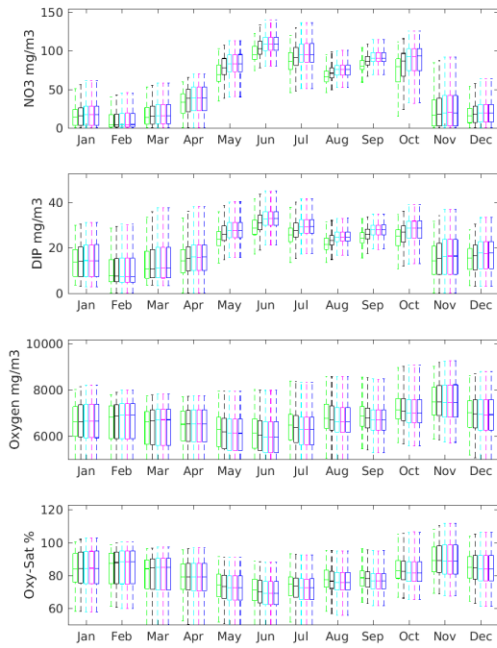
### M8 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



### M7 Surface

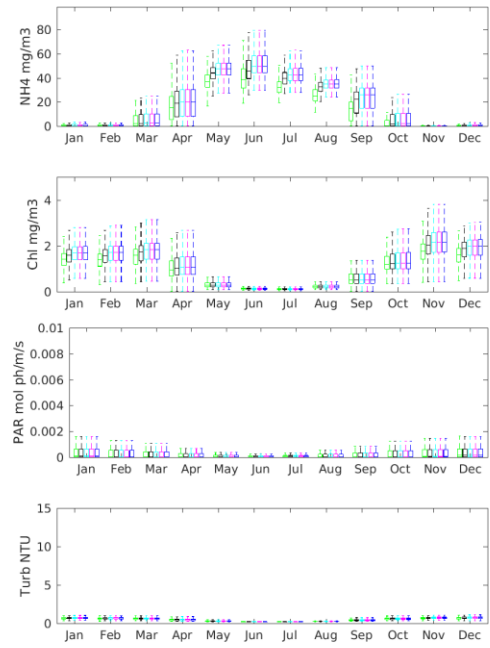
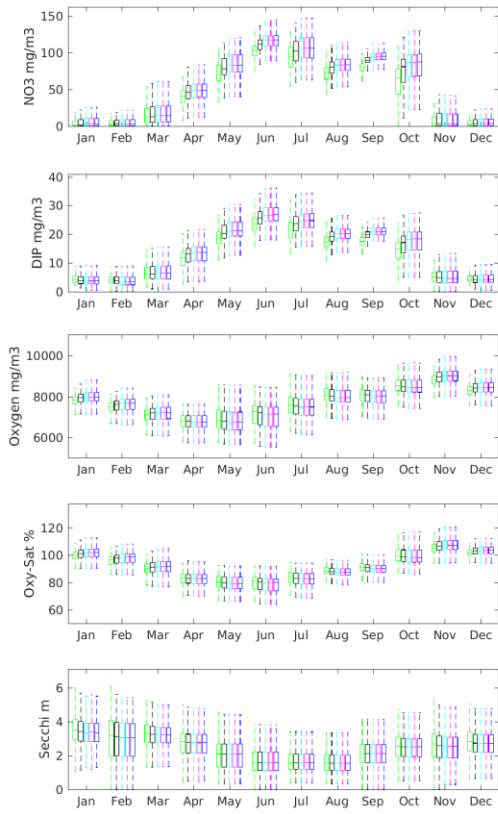
Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



### M7 Bottom

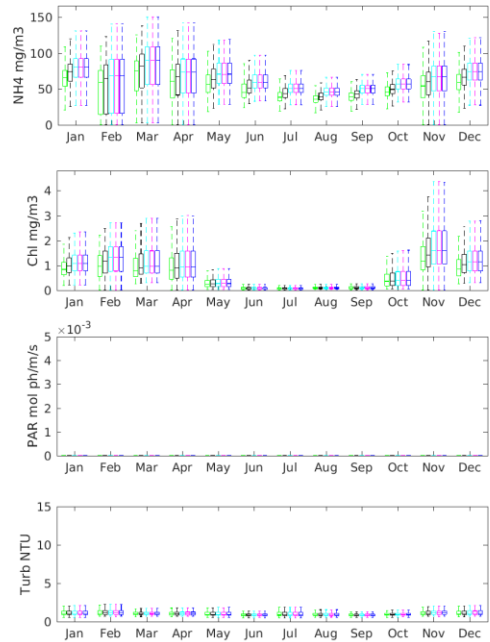
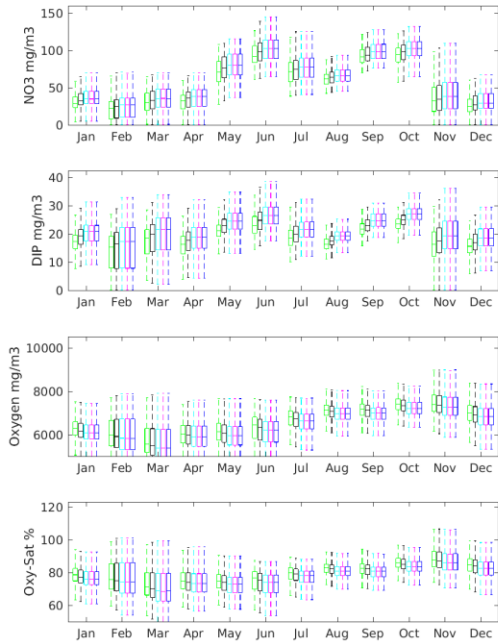
Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB





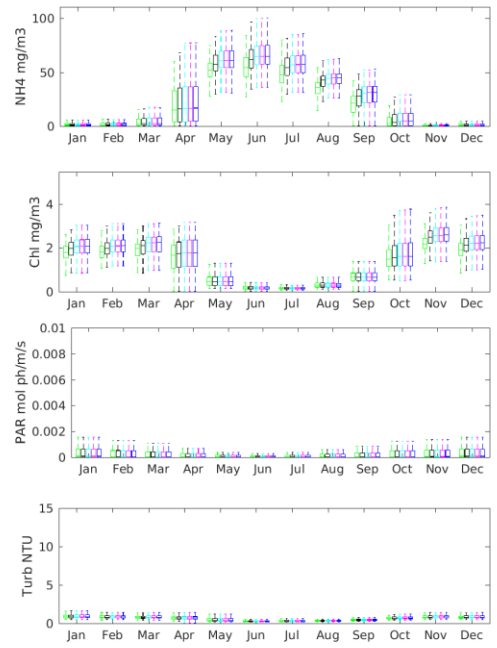
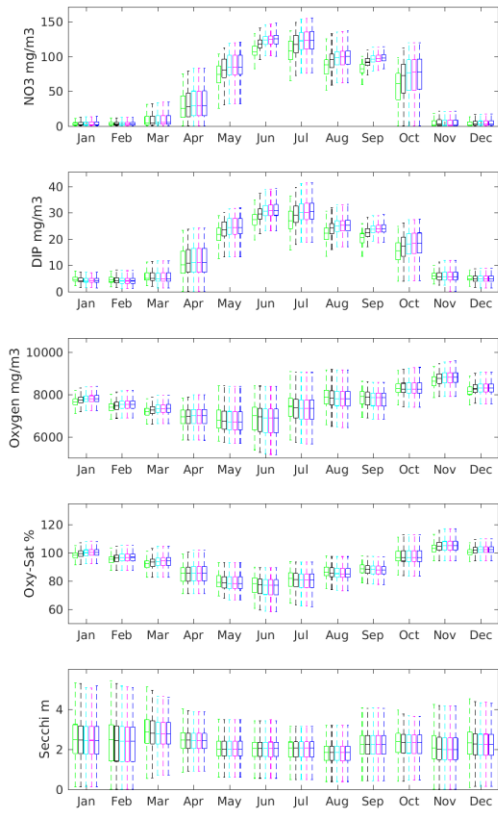
### M6 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



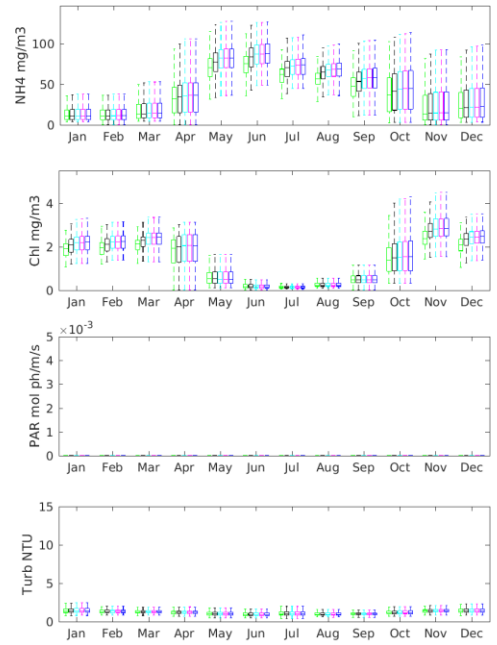
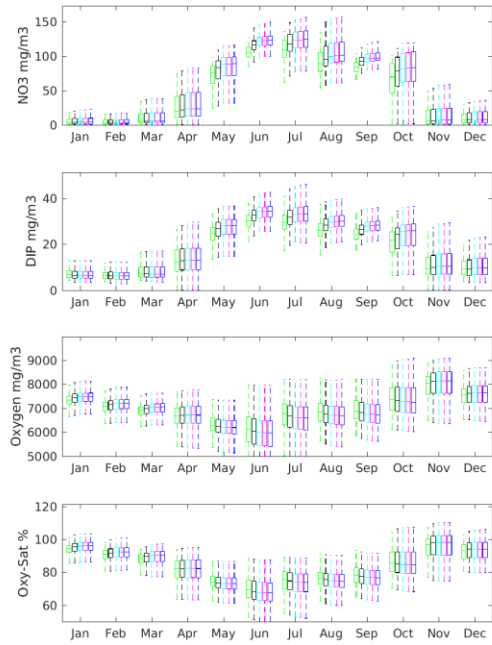
### M6 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



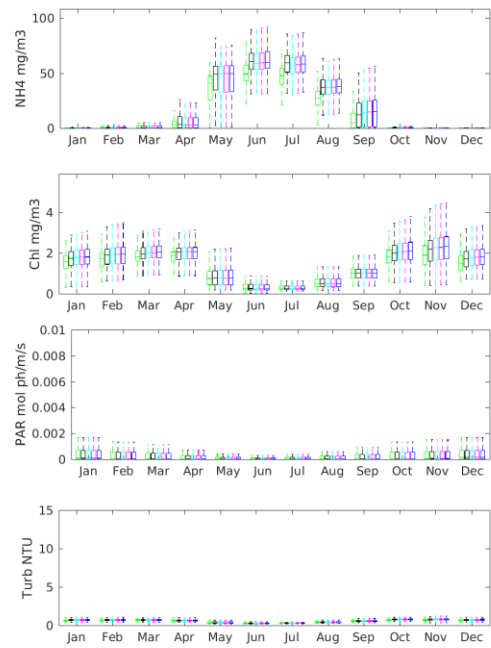
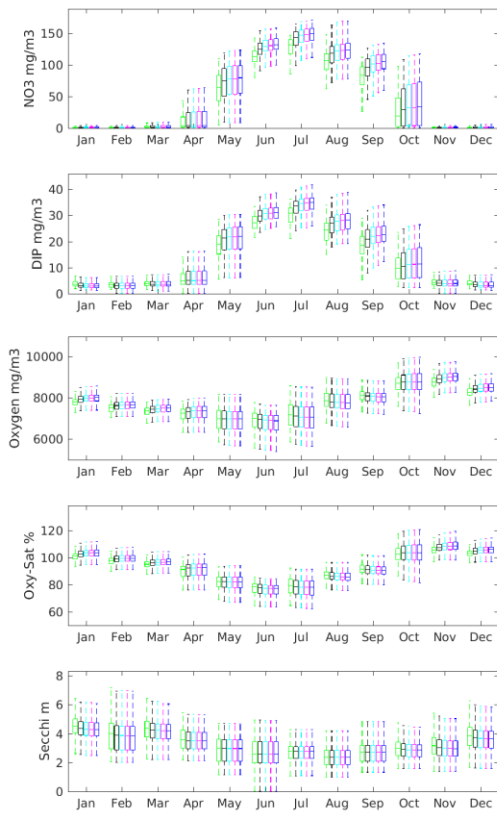
### M5 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



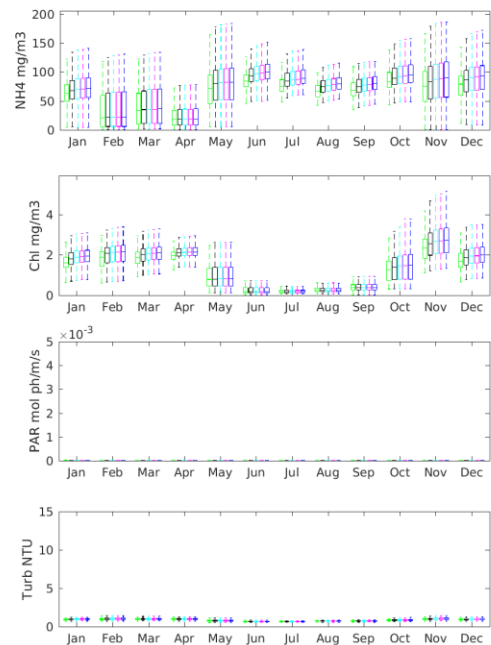
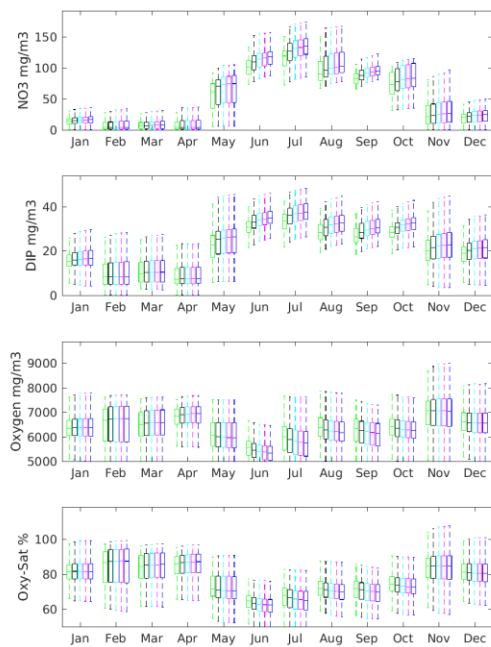
### M5 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



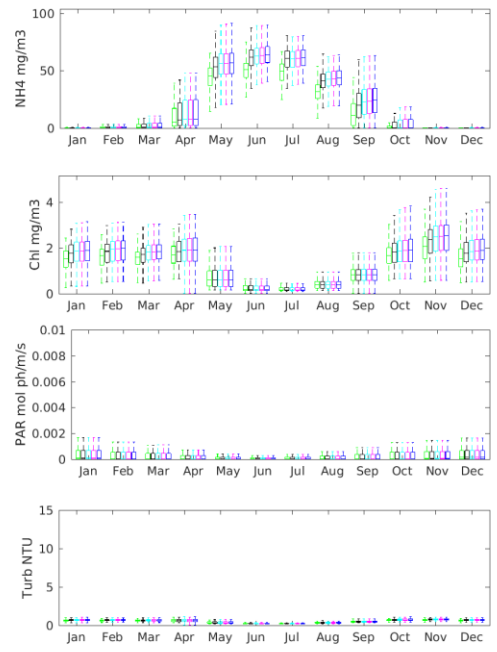
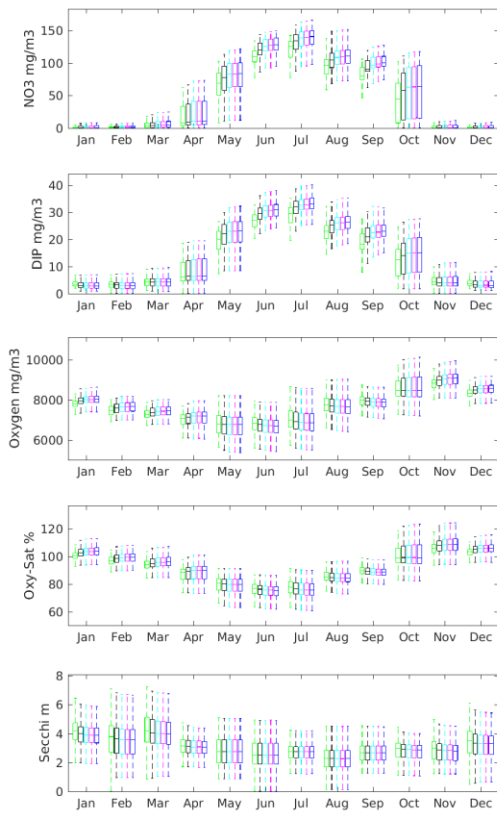
### M4 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



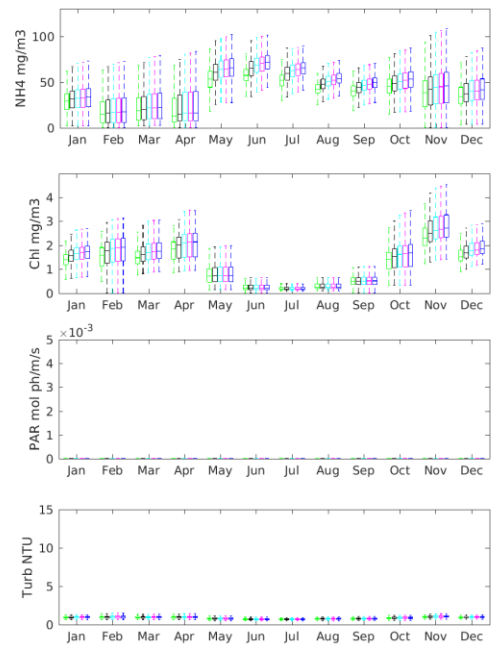
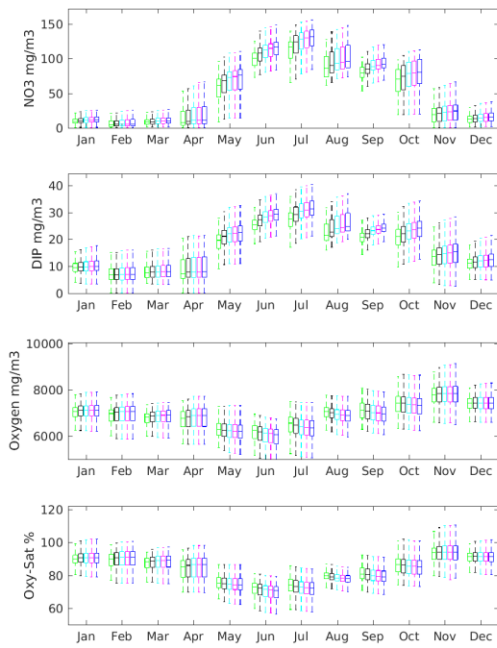
### M4 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



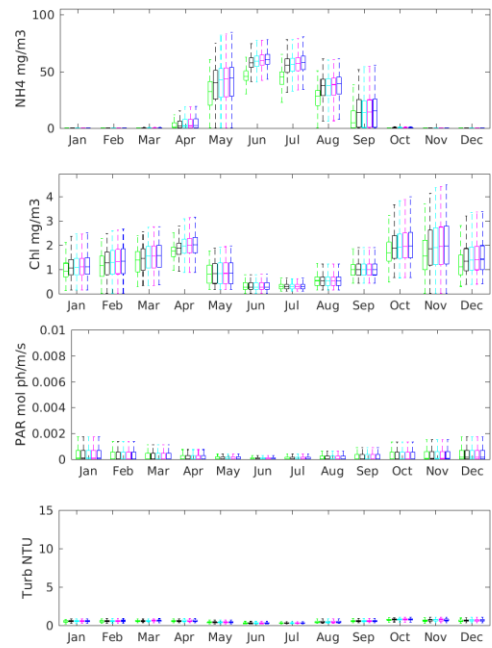
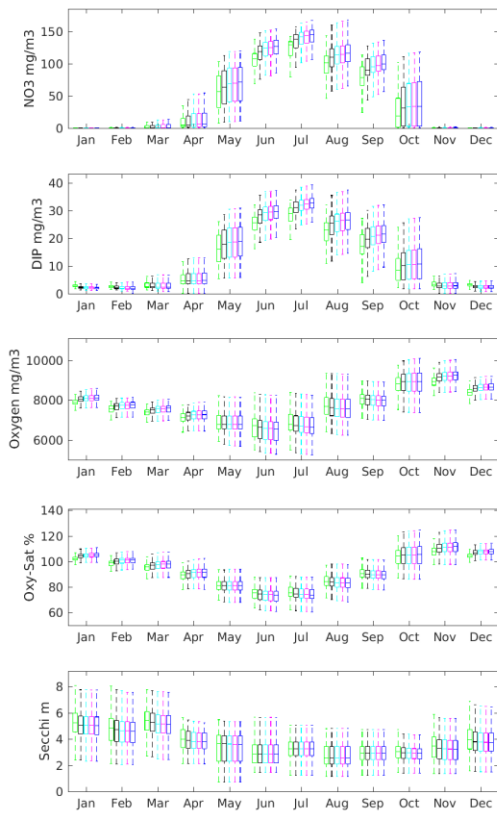
### M3 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



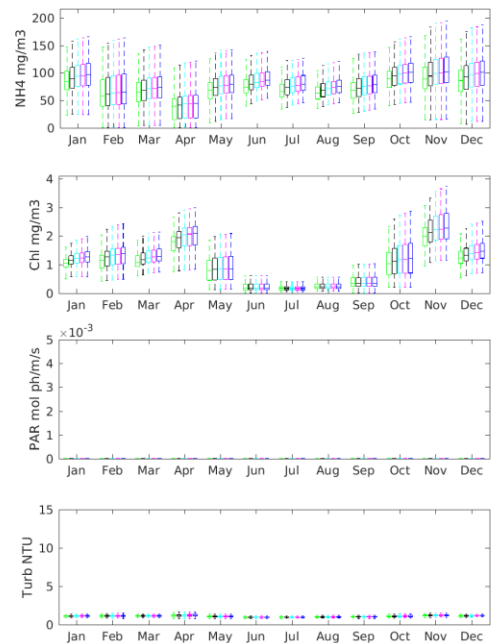
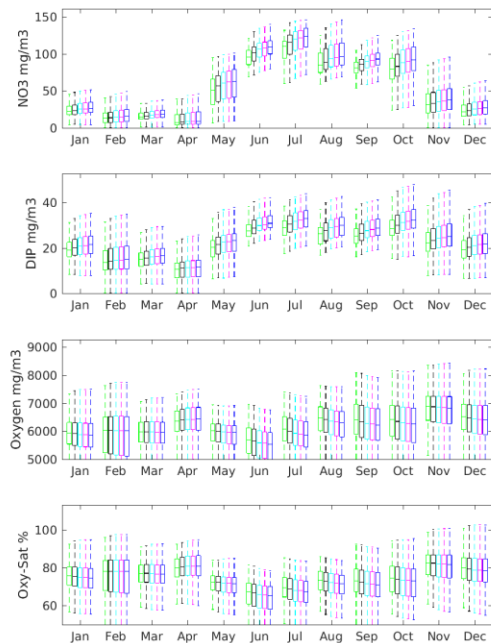
### M3 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



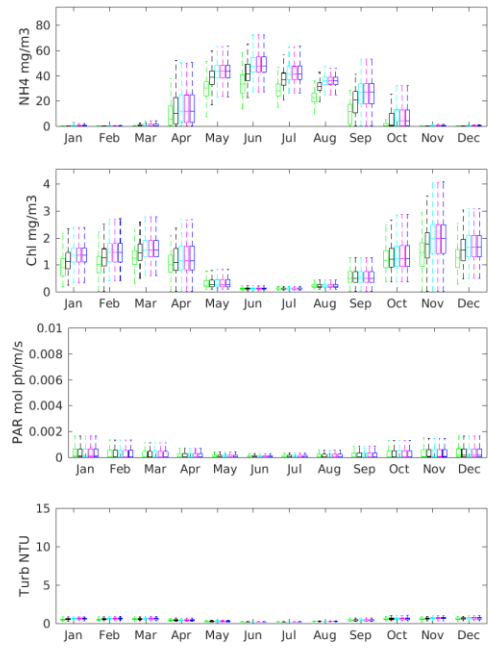
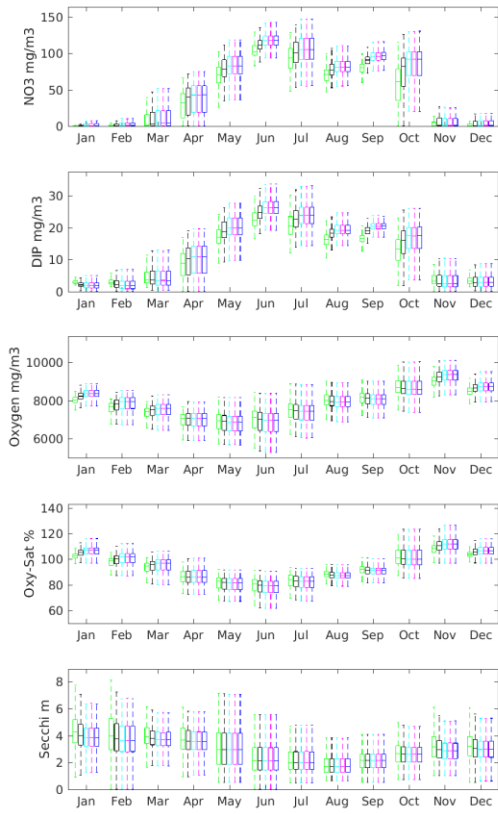
## M2 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



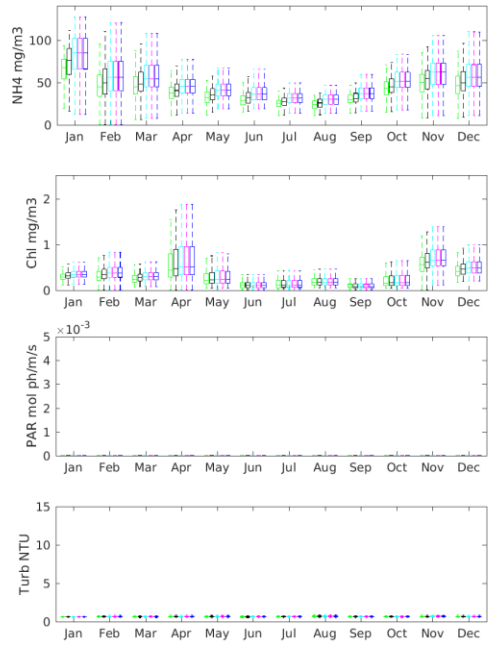
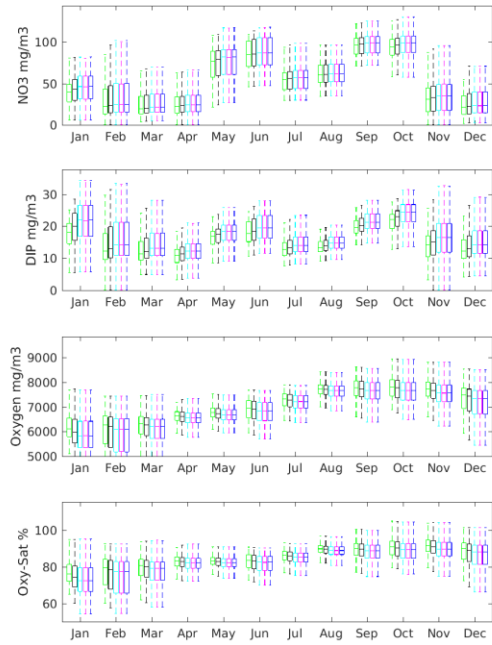
## M2 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



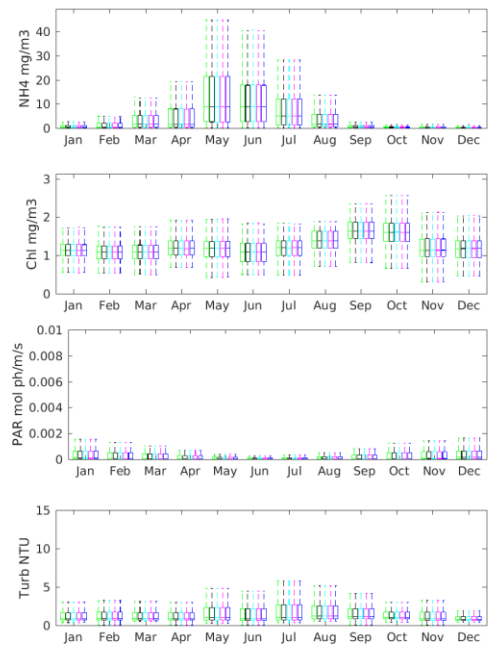
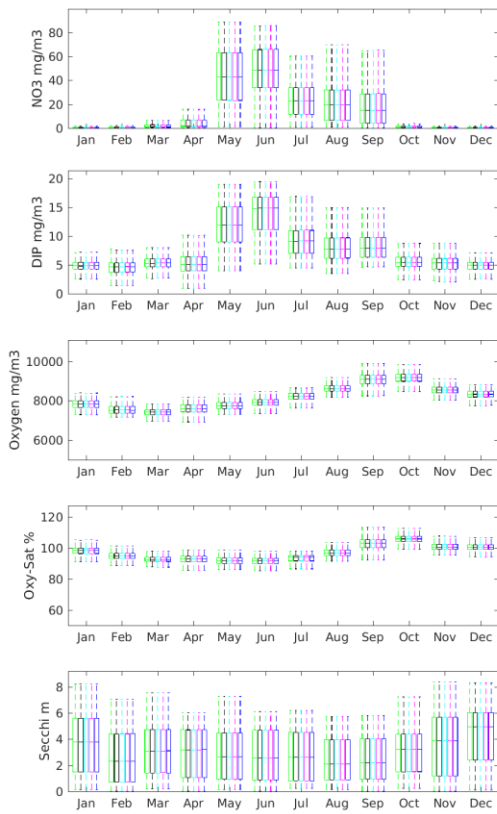
### C9 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



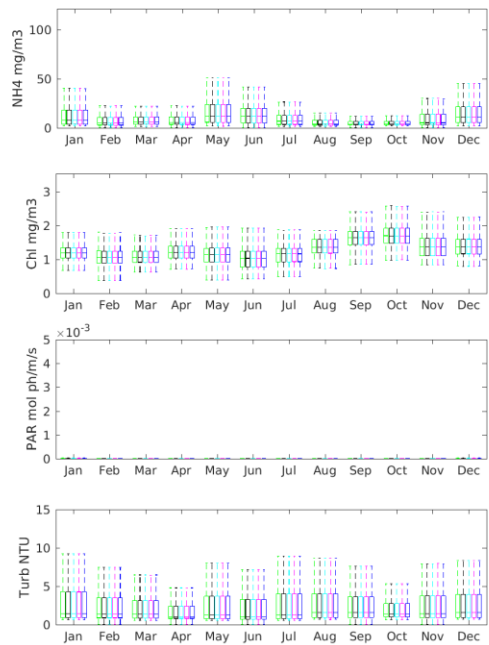
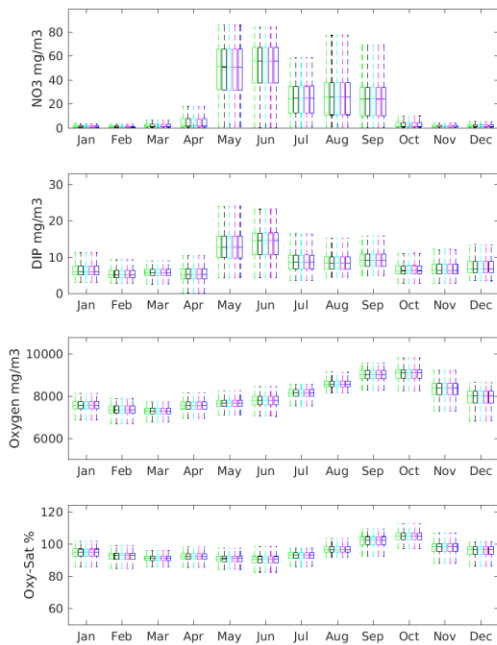
### C9 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



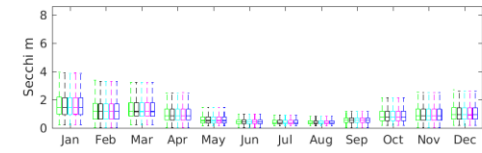
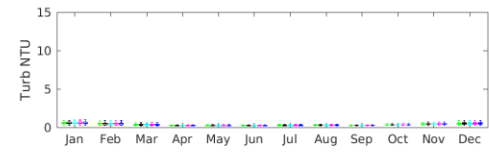
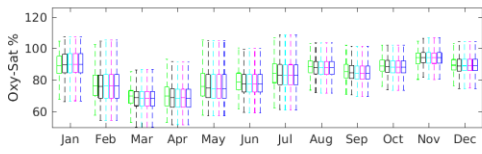
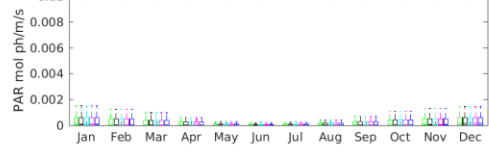
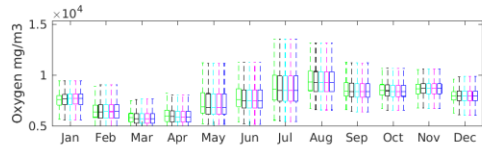
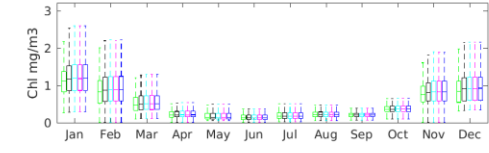
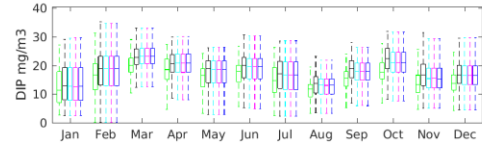
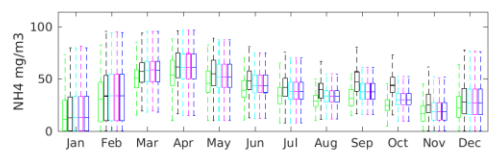
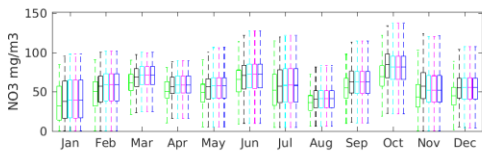
### M15 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



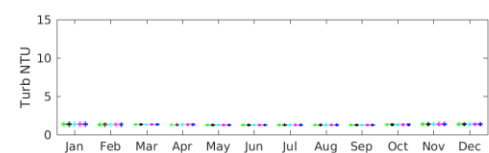
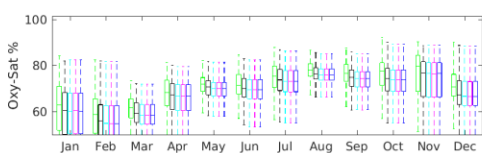
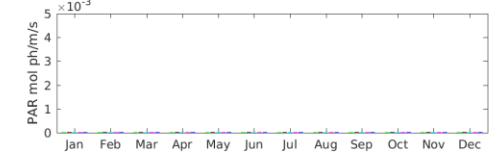
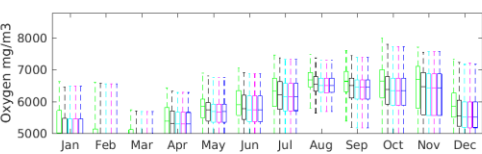
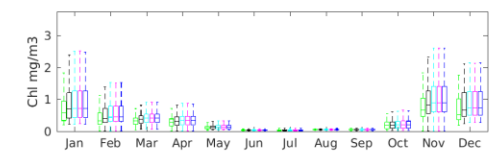
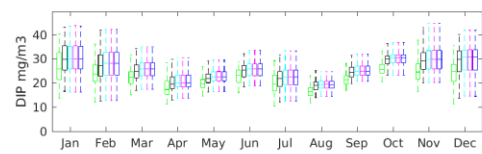
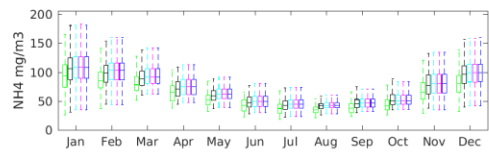
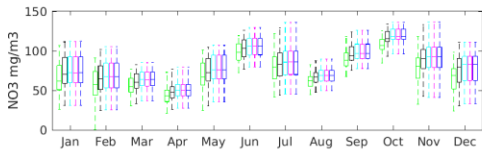
### M15 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



### M14 Surface

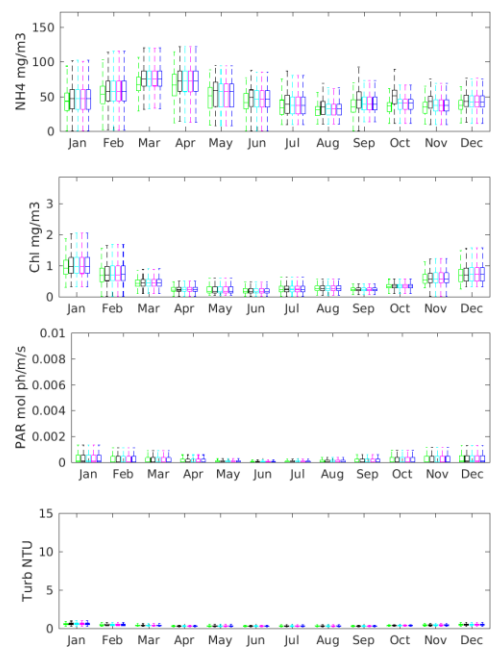
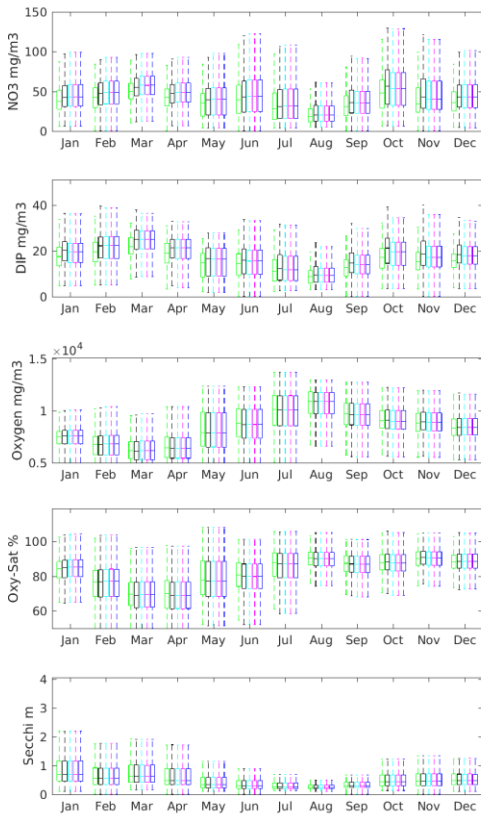
Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



### M14 Bottom

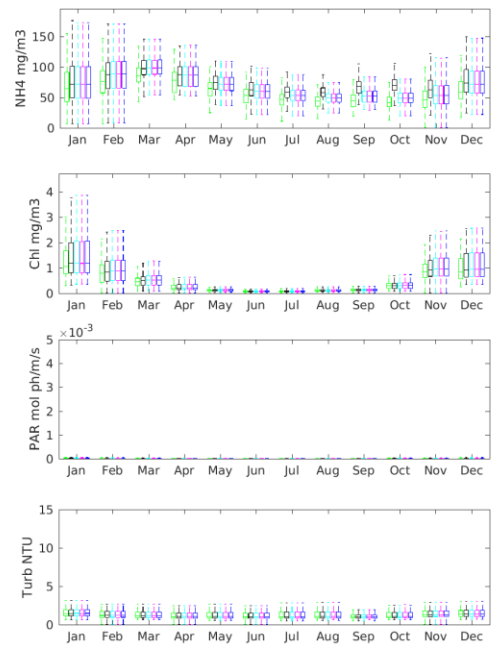
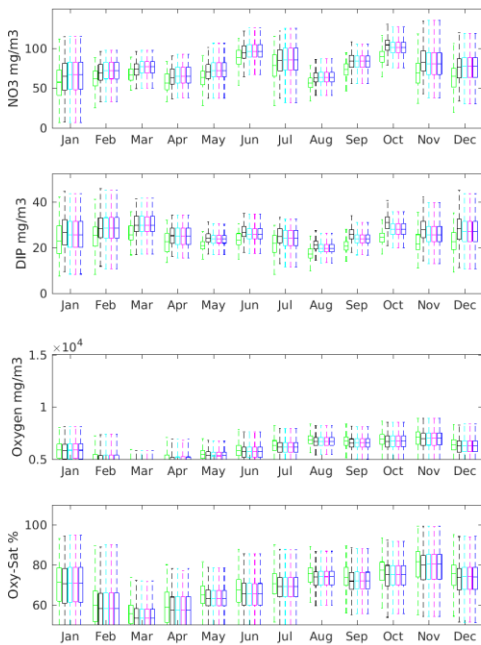
Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB





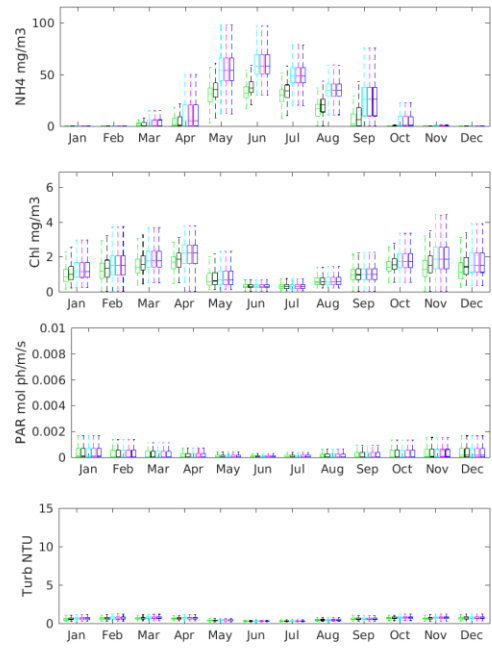
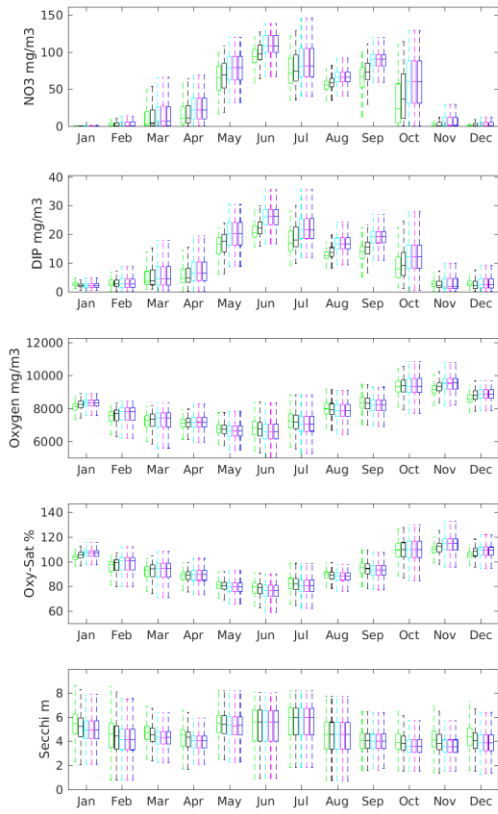
### M13 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



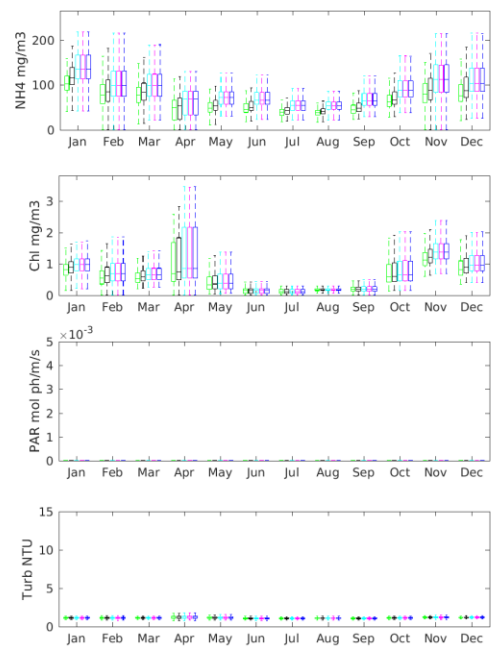
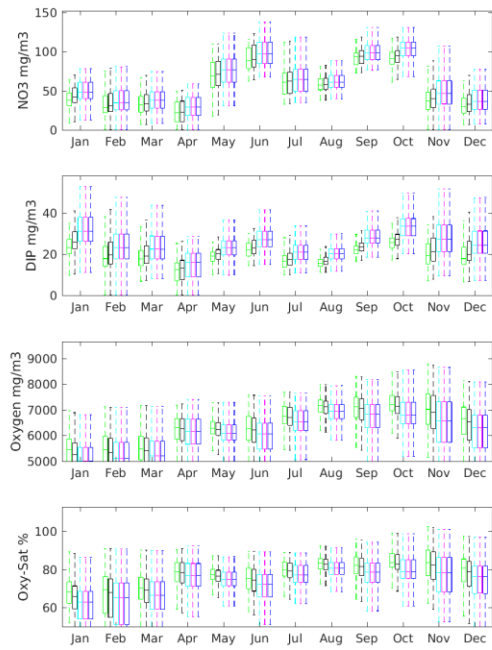
### M13 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



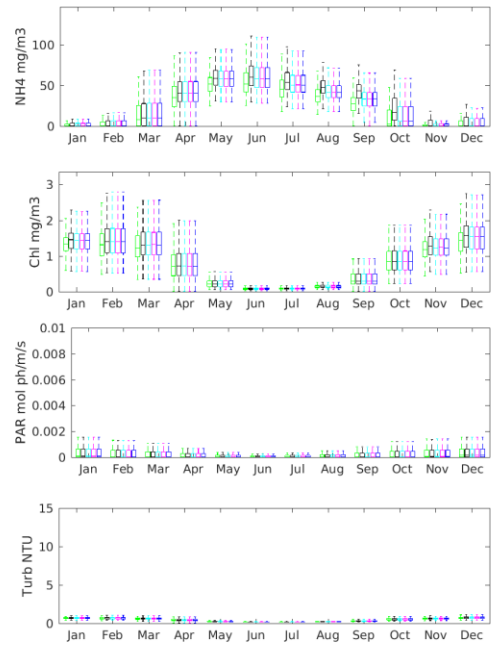
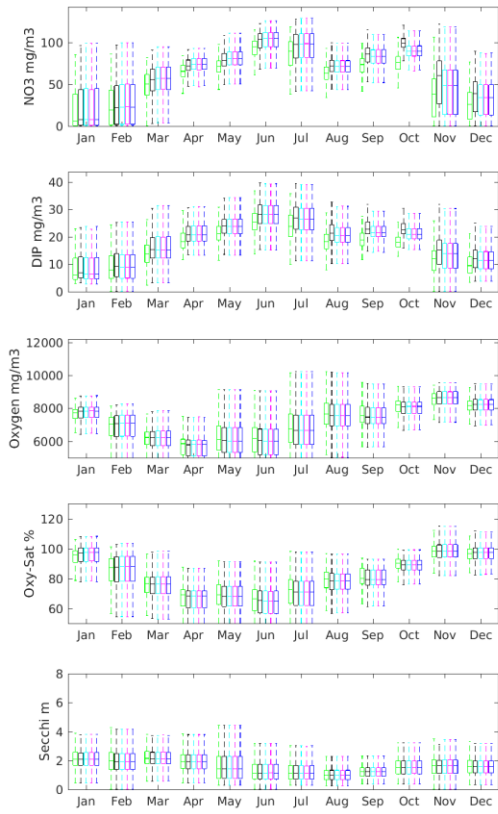
### M12 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



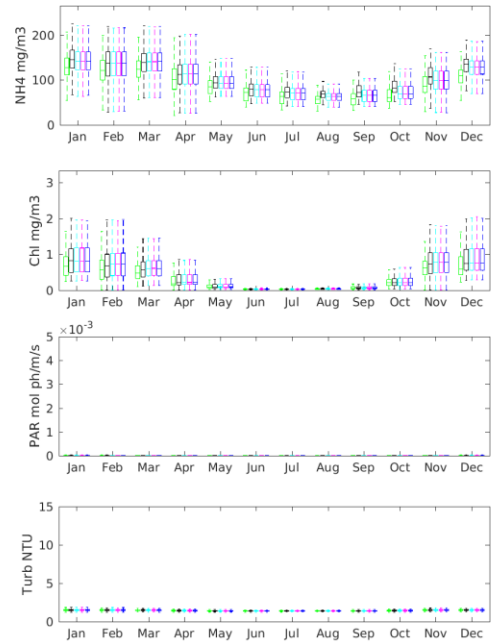
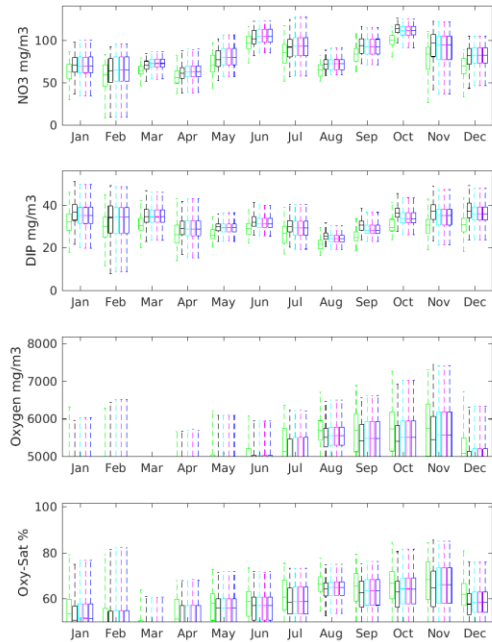
### M12 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



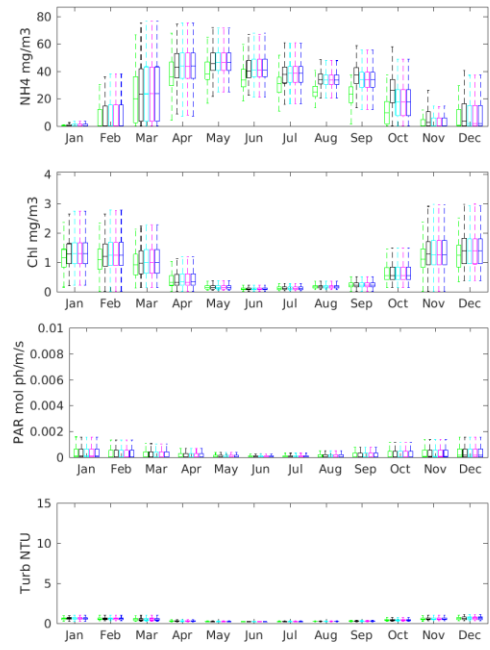
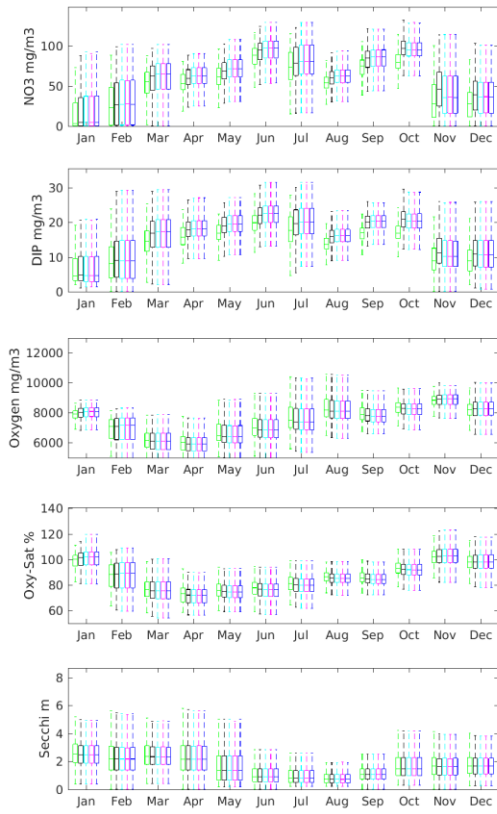
### M11 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



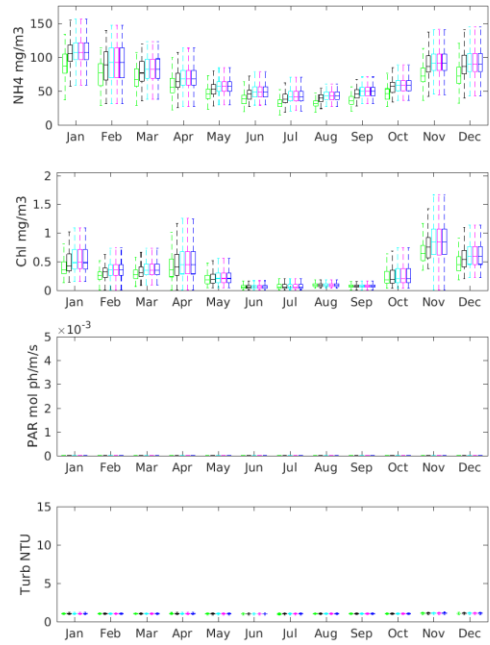
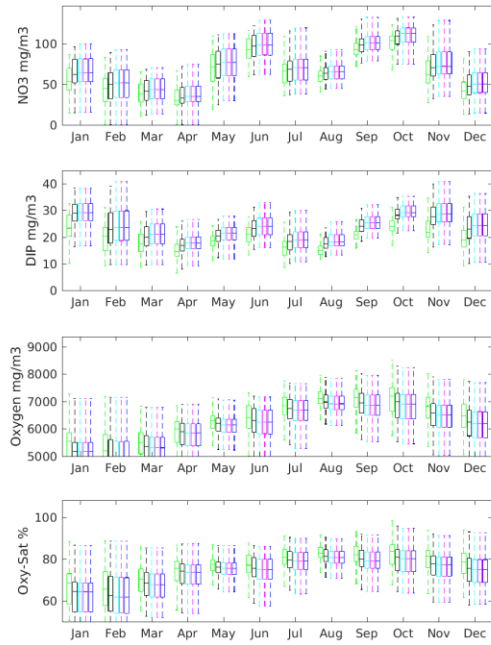
### M11 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



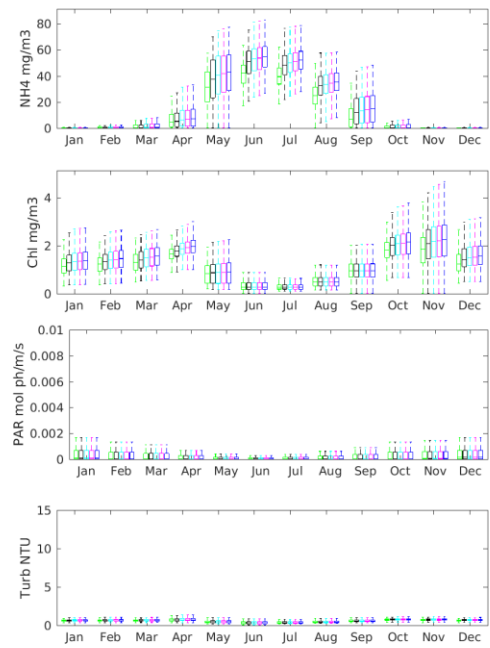
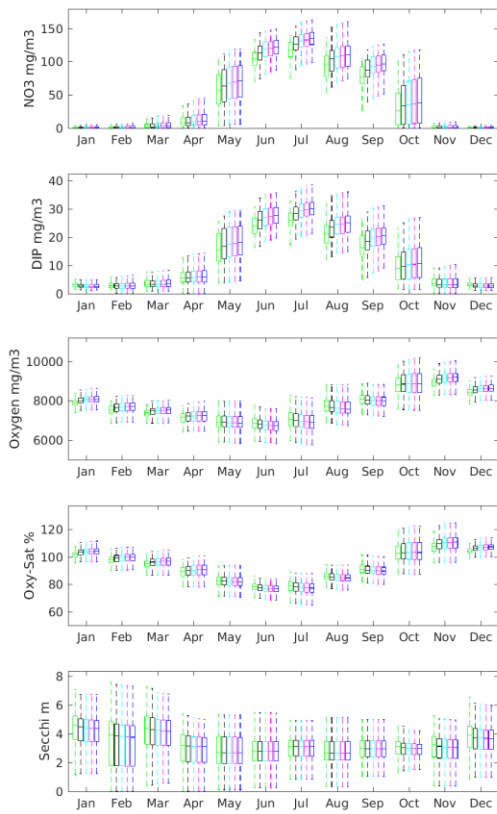
### M10 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



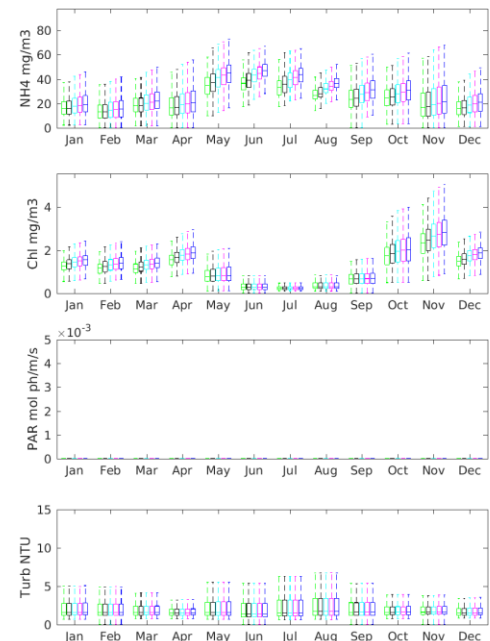
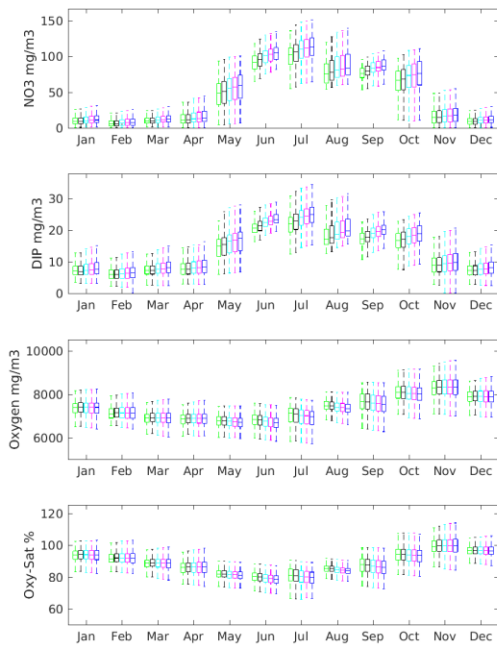
### M10 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



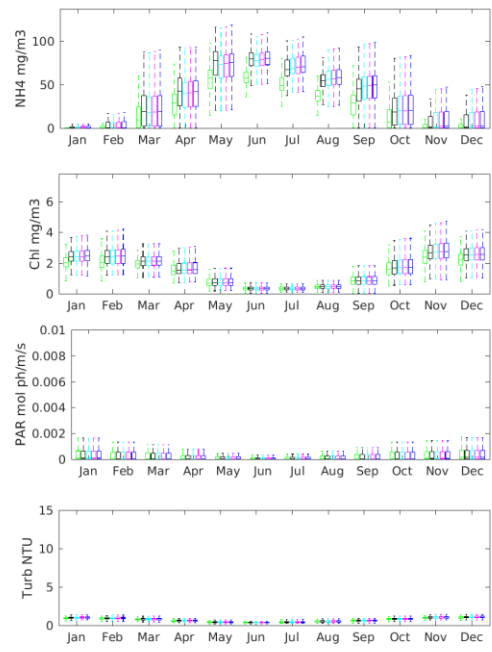
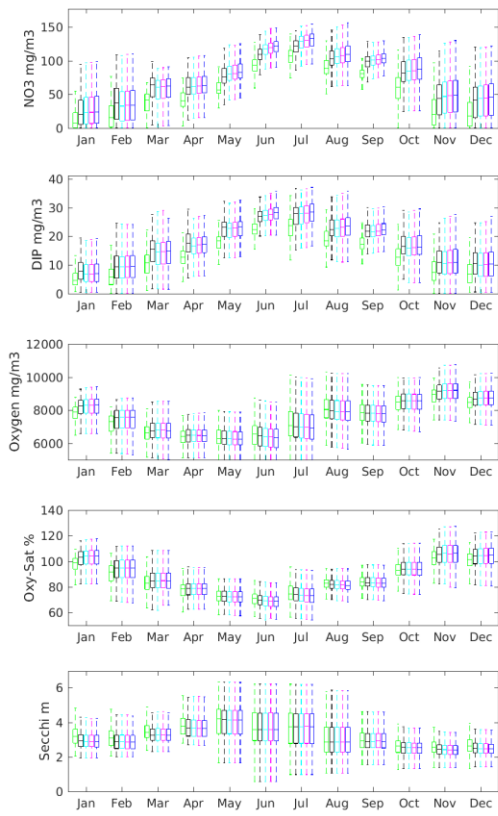
### M1 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



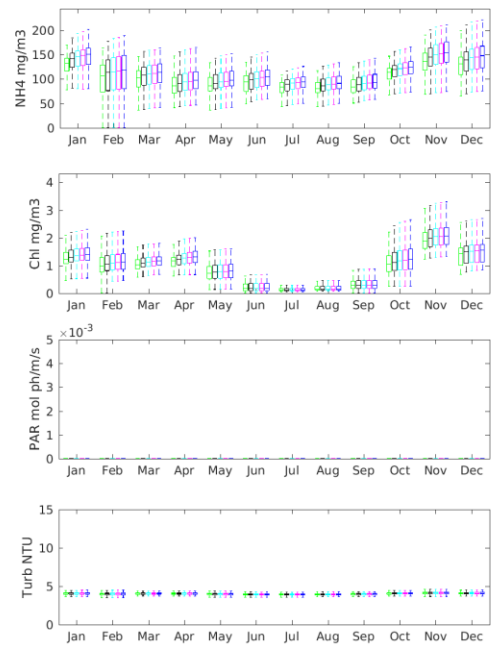
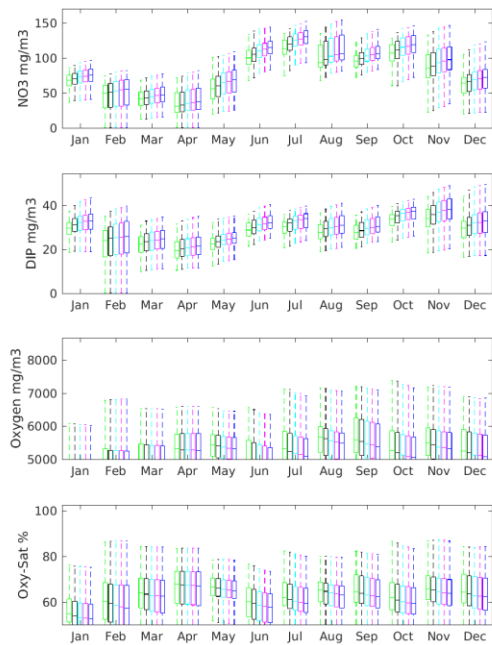
### M1 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



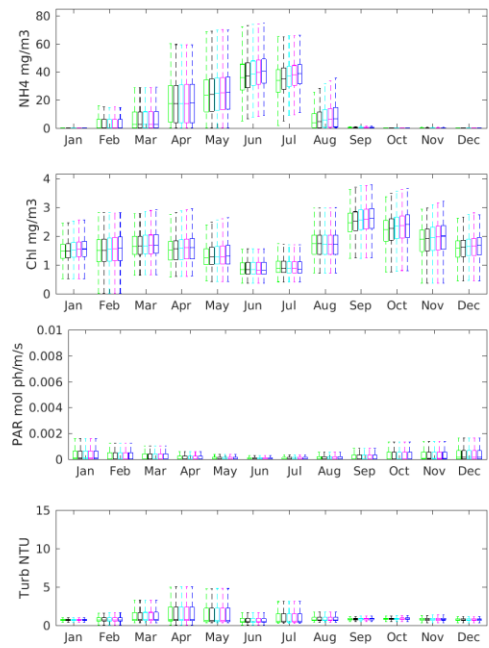
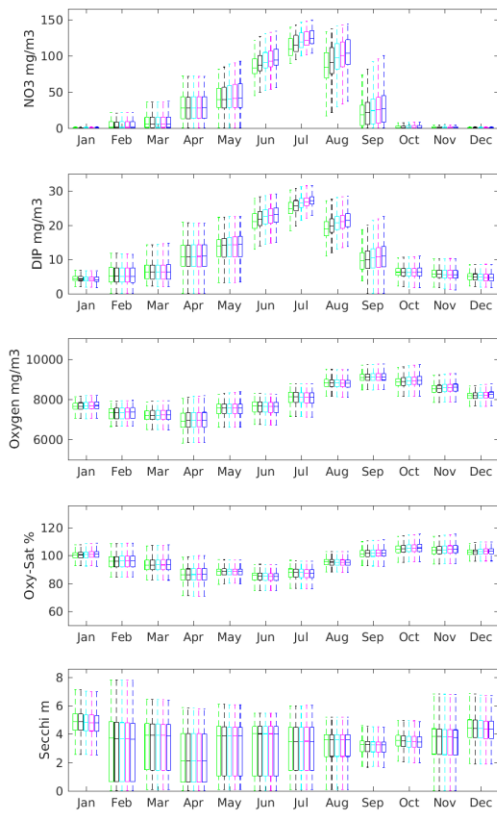
## G2 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



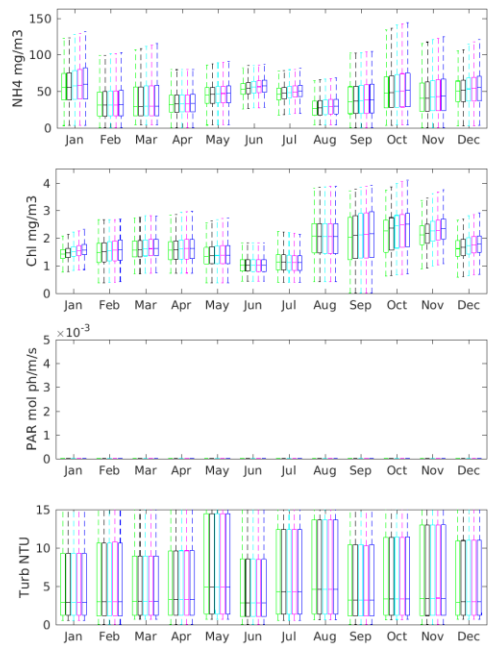
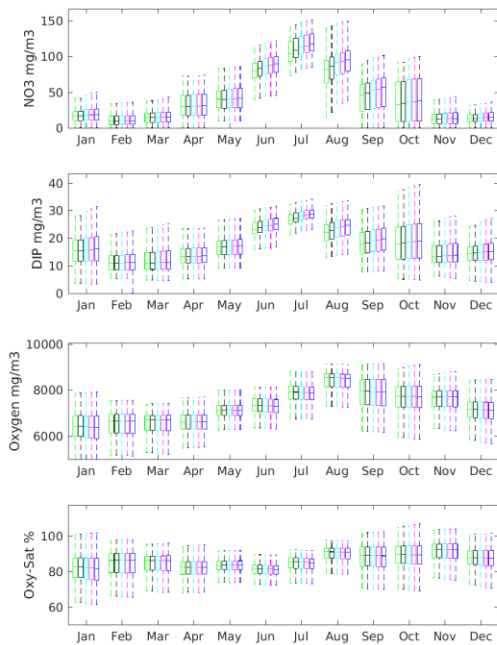
## G2 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



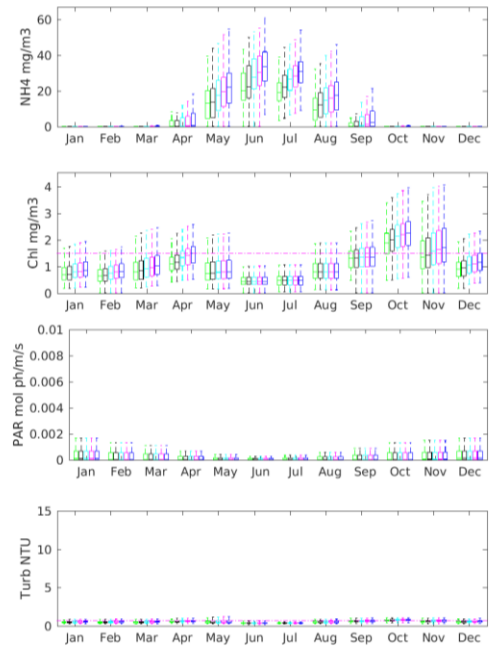
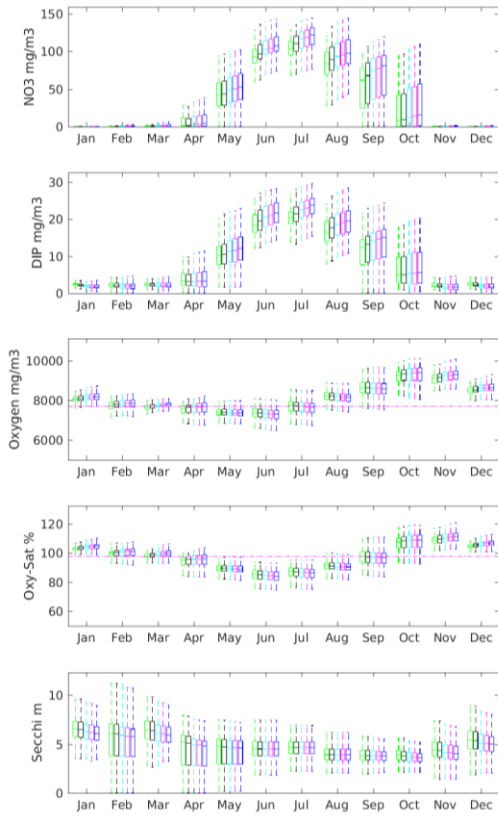
### FHenryB Surface

- Pre Develop
- Pre SB Develop
- 2020+2ktN in SB
- 2020+3ktN in SB
- 2020+4.5ktN in SB



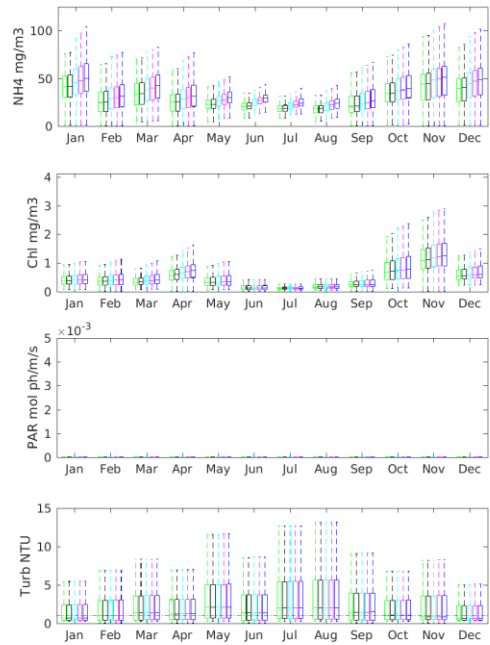
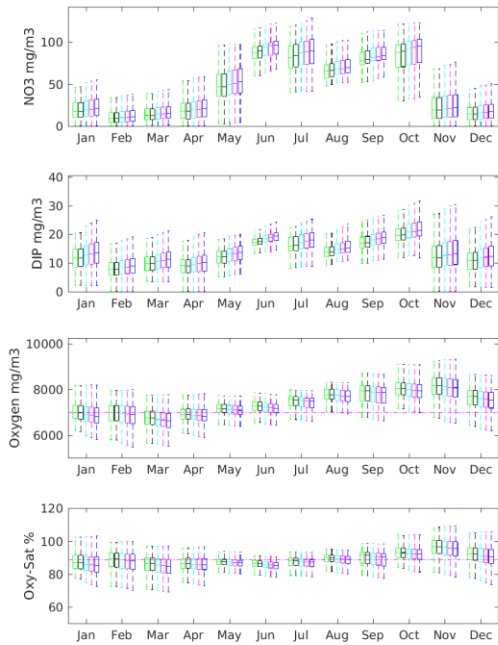
### FHenryB Bottom

- Pre Develop
- Pre SB Develop
- 2020+2ktN in SB
- 2020+3ktN in SB
- 2020+4.5ktN in SB



Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB

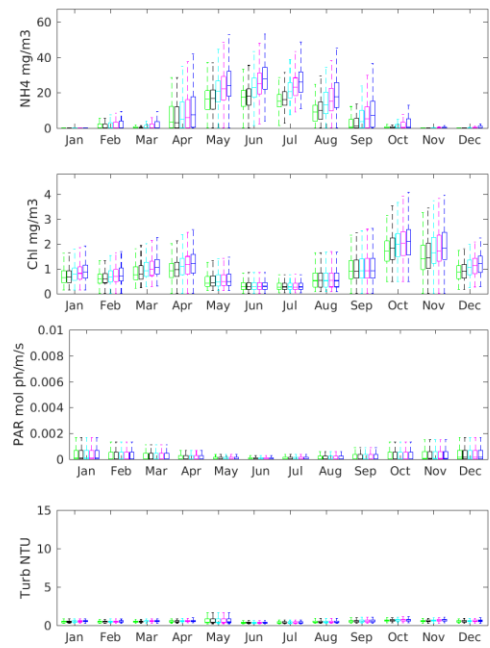
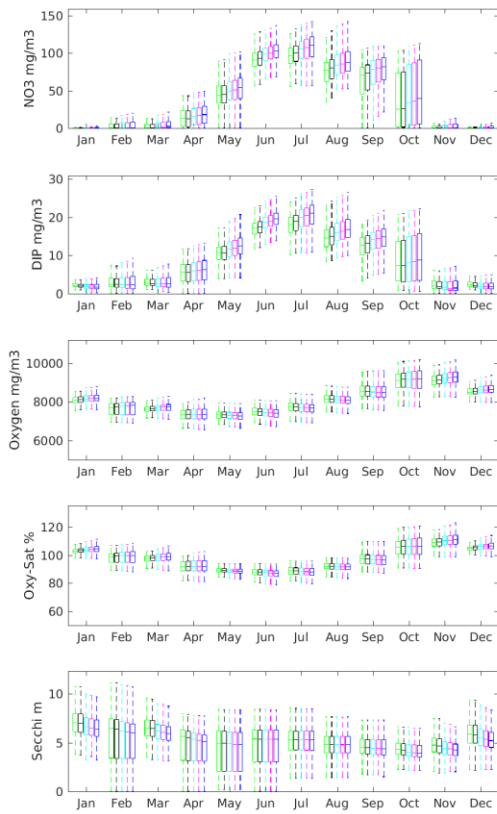
EYellowB\_SB14 Surface



Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB

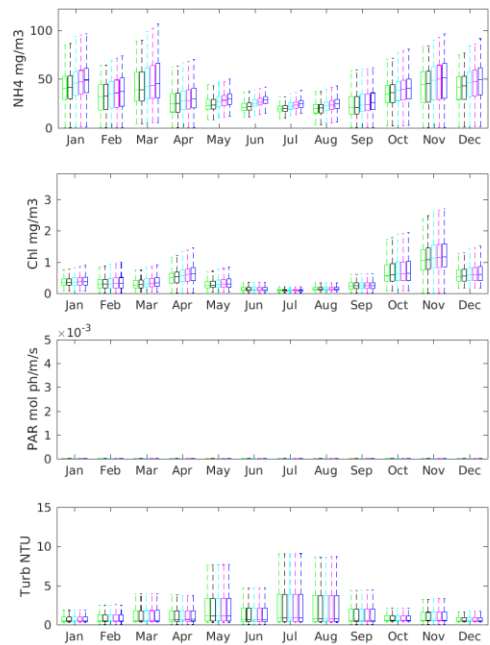
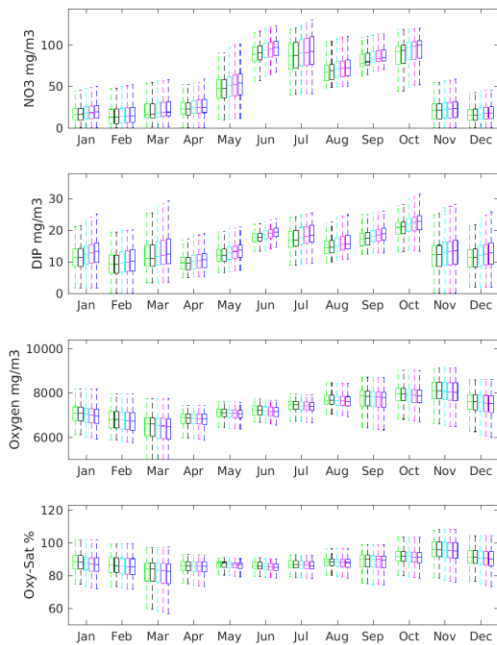
EYellowB\_SB14 Bottom





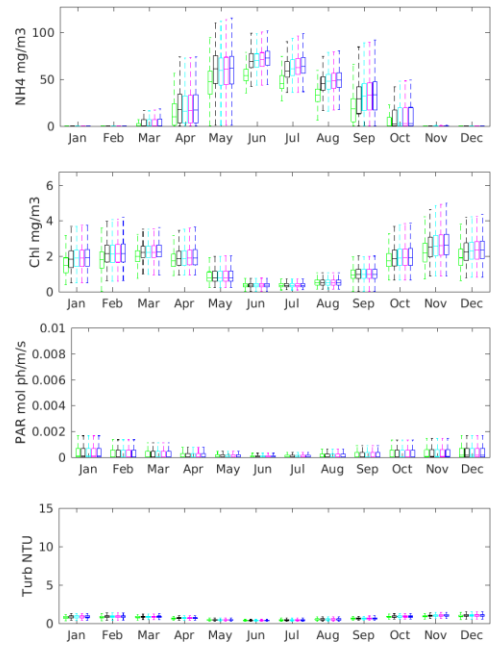
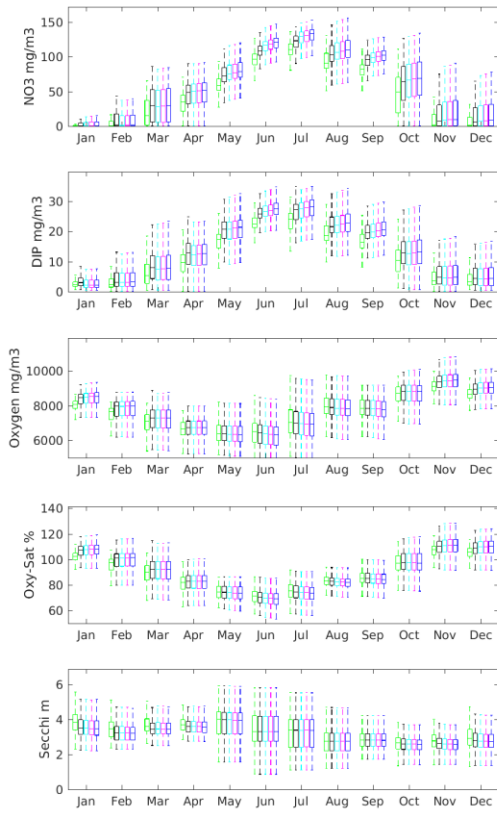
### ETRUM\_SB15 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



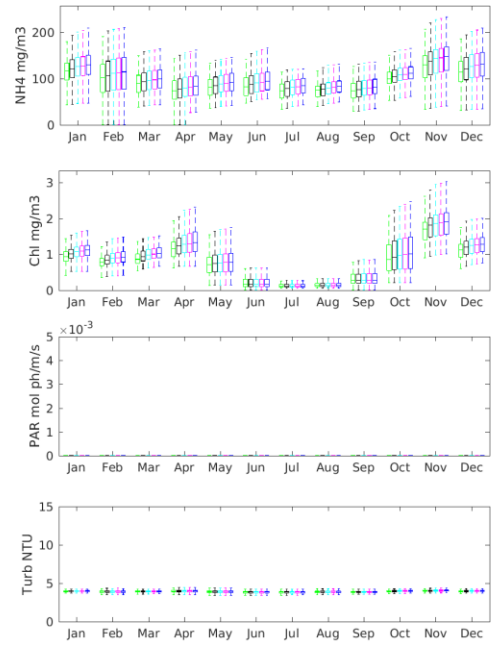
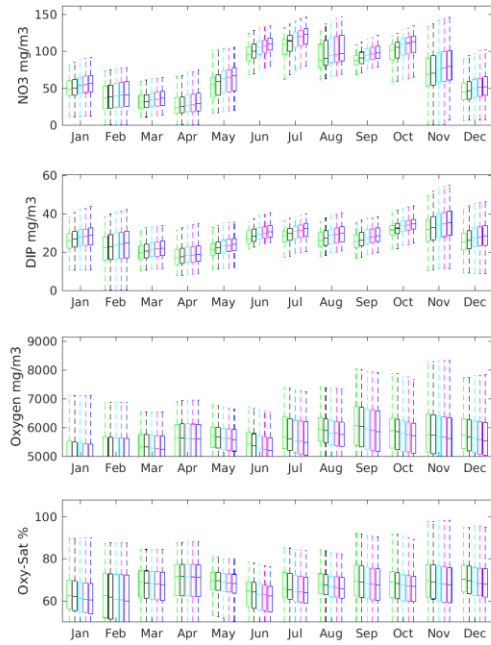
### ETRUM\_SB15 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



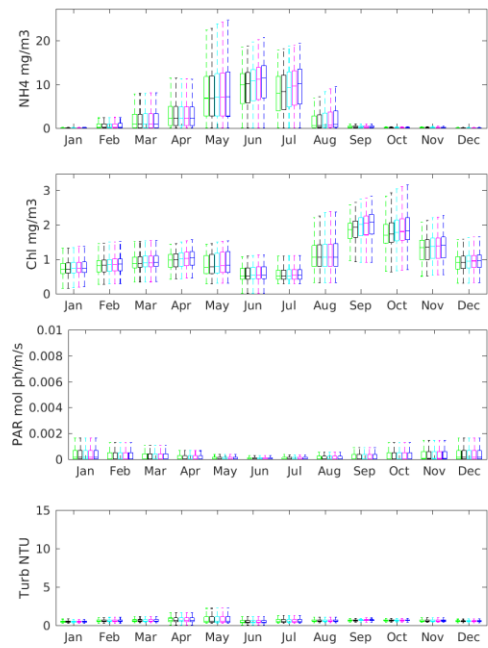
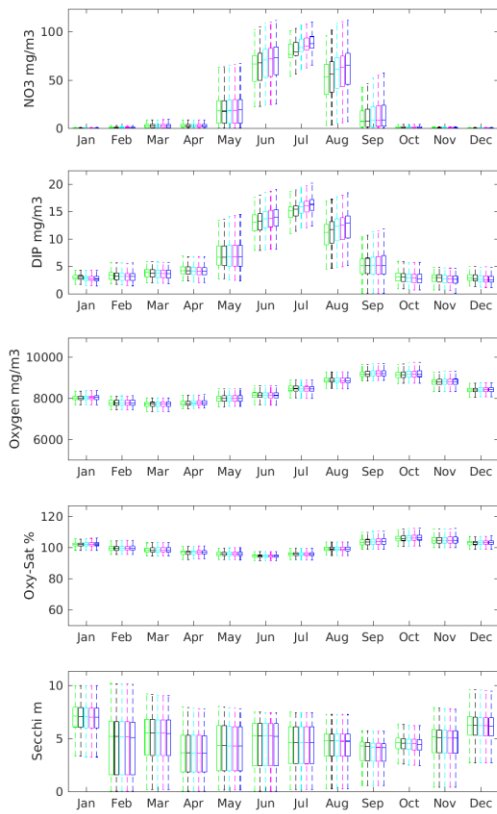
Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB

### E Surface



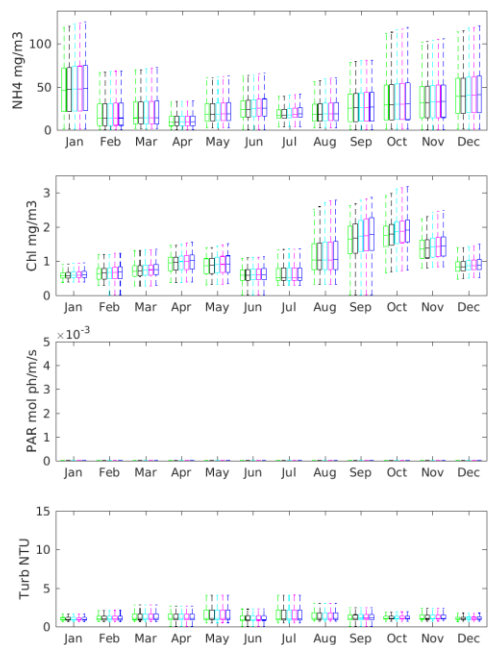
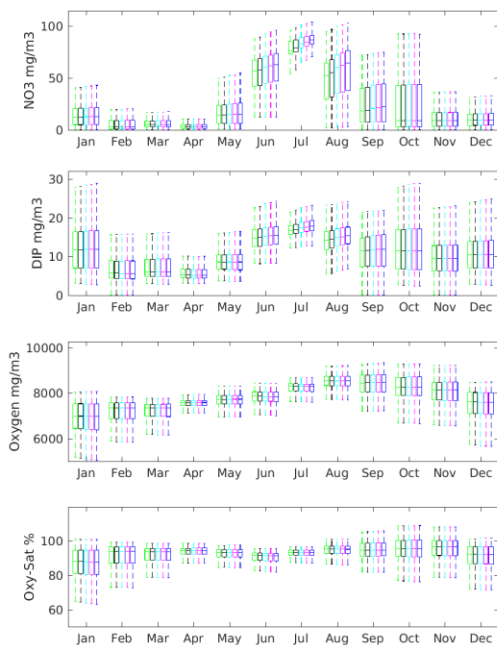
Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB

### E Bottom



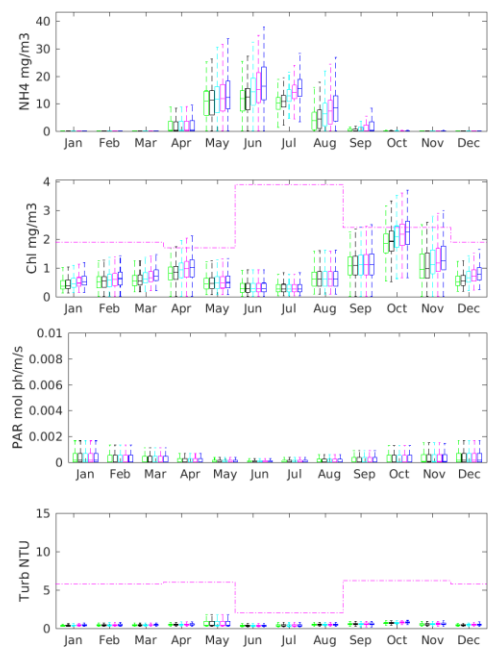
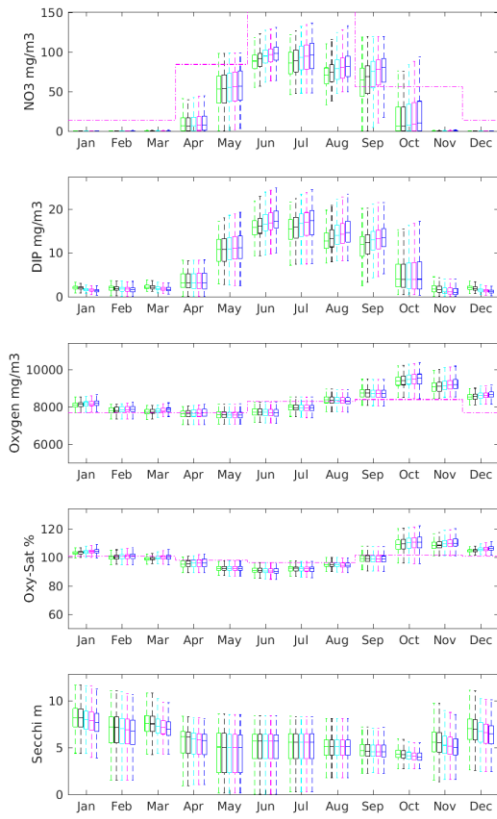
### Dog Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



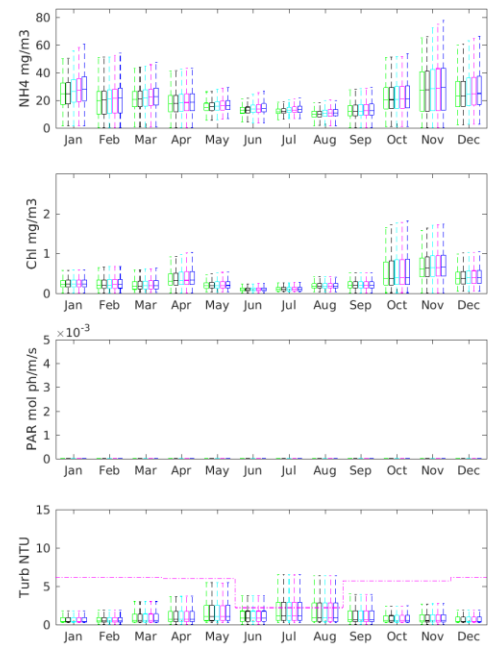
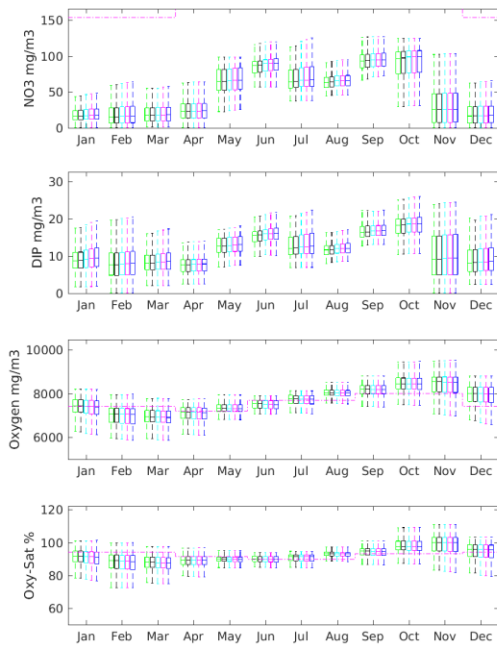
### Dog Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



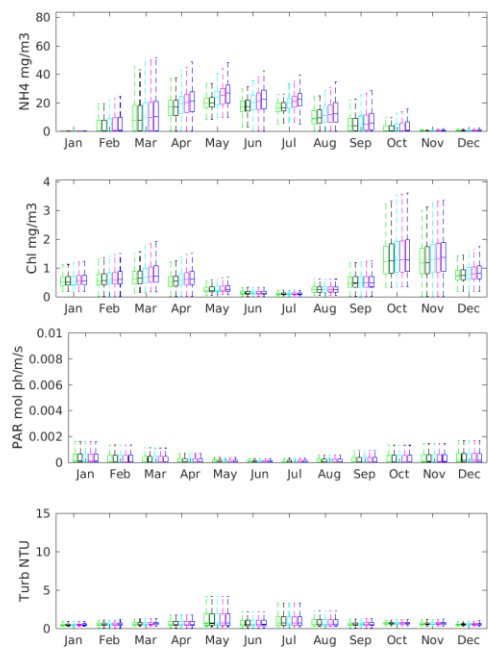
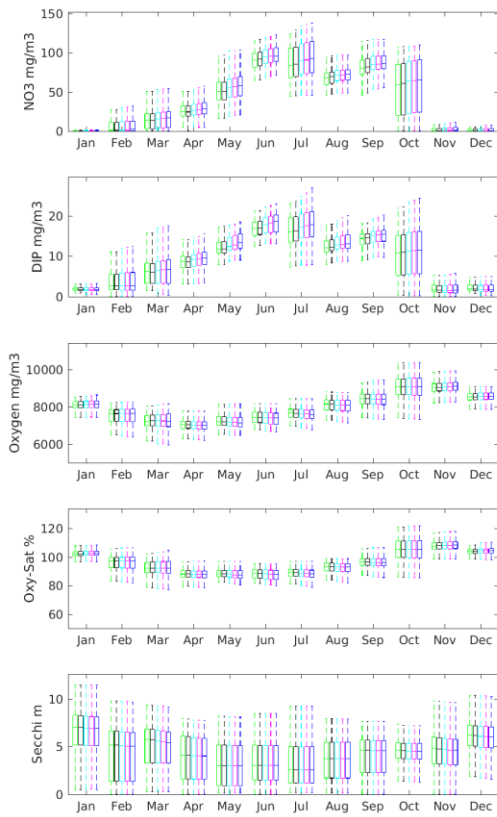
### Dart\_SB7 Surface

- Pre Develop
- Pre SB Develop
- 2020+2ktN in SB
- 2020+3ktN in SB
- 2020+4.5ktN in SB



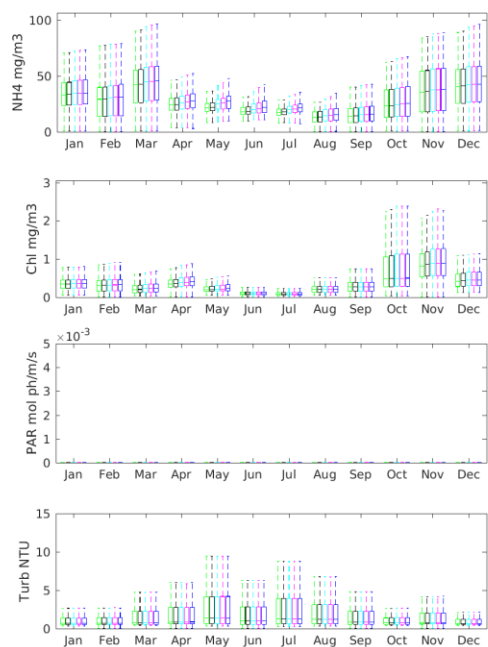
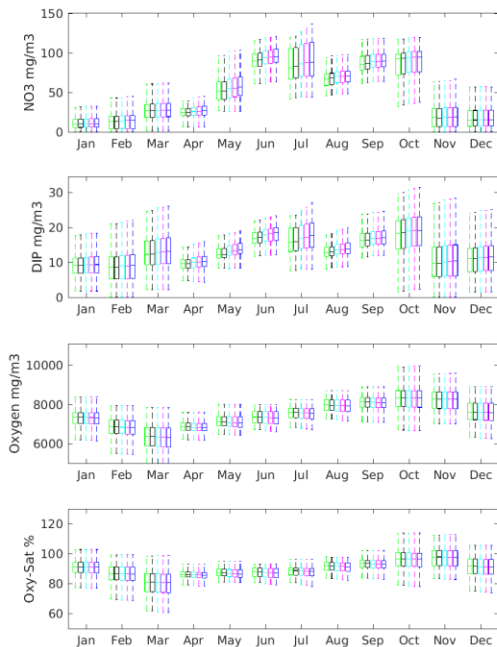
### Dart\_SB7 Bottom

- Pre Develop
- Pre SB Develop
- 2020+2ktN in SB
- 2020+3ktN in SB
- 2020+4.5ktN in SB



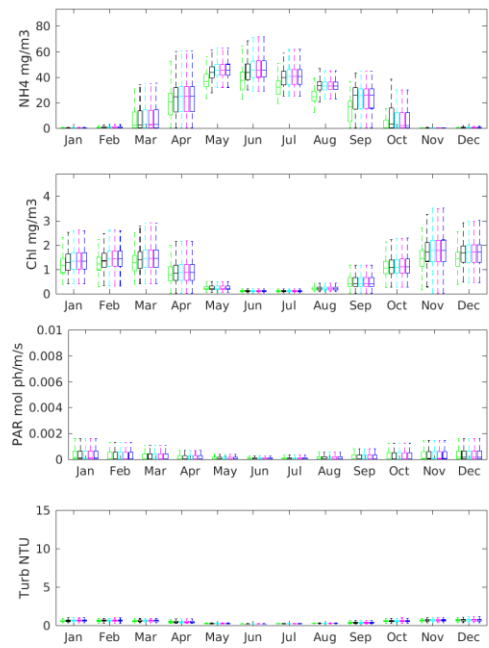
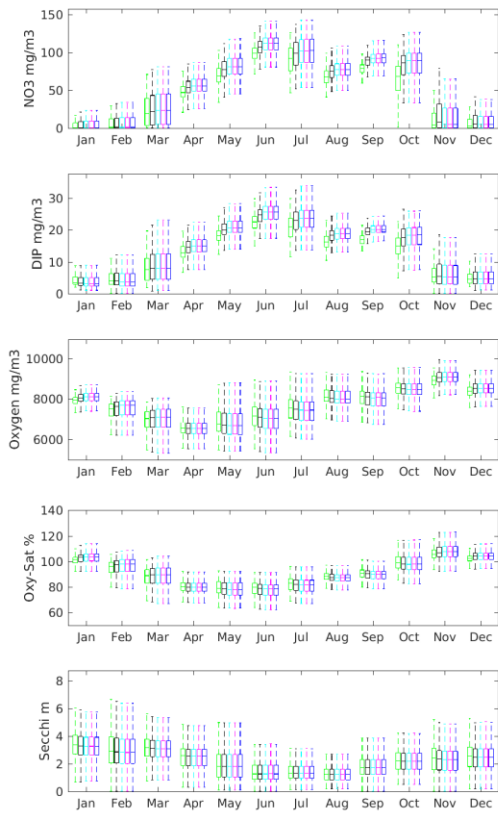
### CQE\_SB4 Surface

- Pre Develop
- Pre SB Develop
- 2020+2ktN in SB
- 2020+3ktN in SB
- 2020+4.5ktN in SB



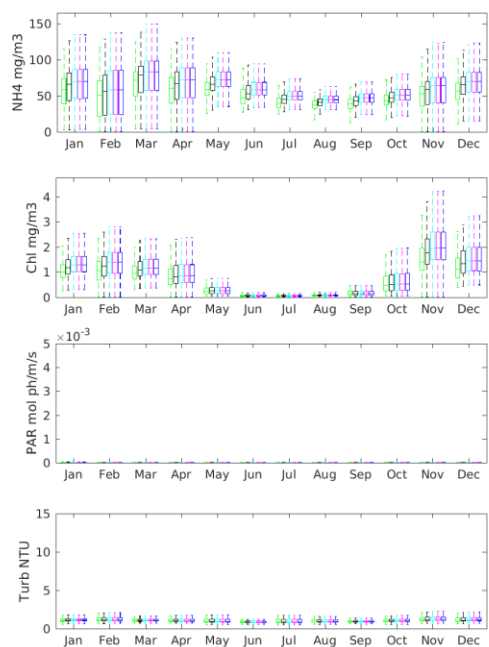
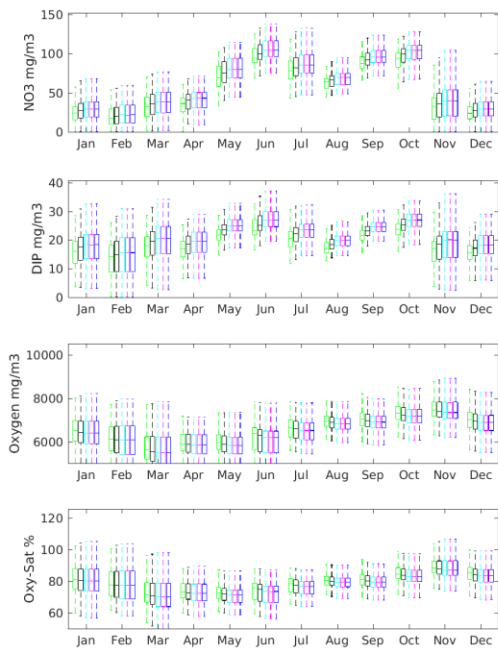
### CQE\_SB4 Bottom

- Pre Develop
- Pre SB Develop
- 2020+2ktN in SB
- 2020+3ktN in SB
- 2020+4.5ktN in SB



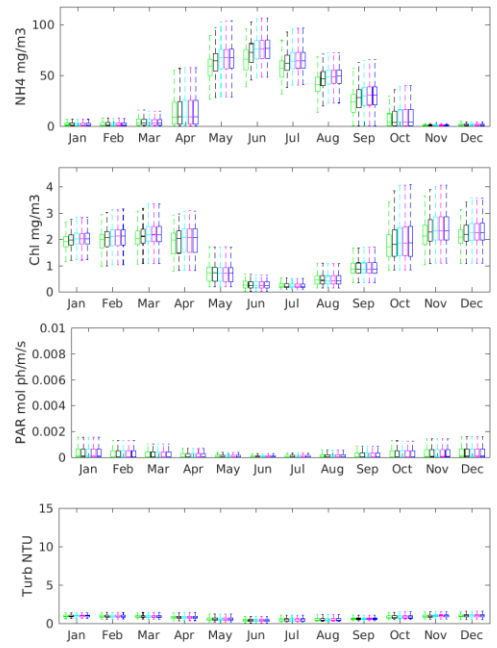
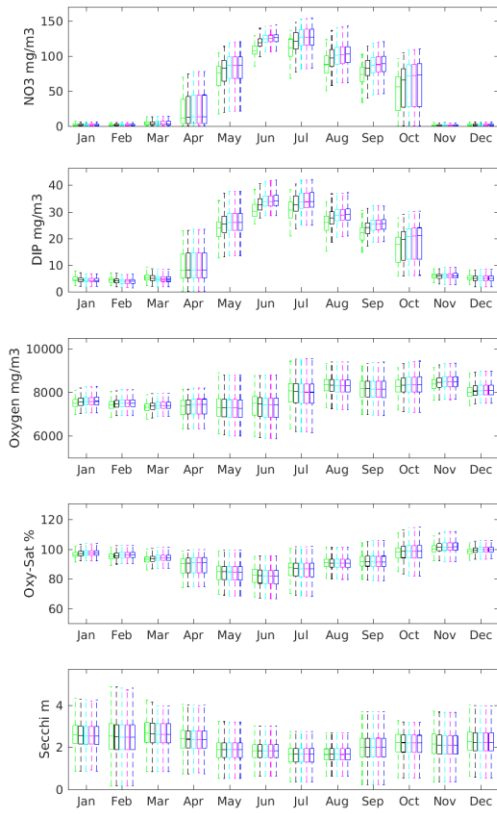
### C7 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



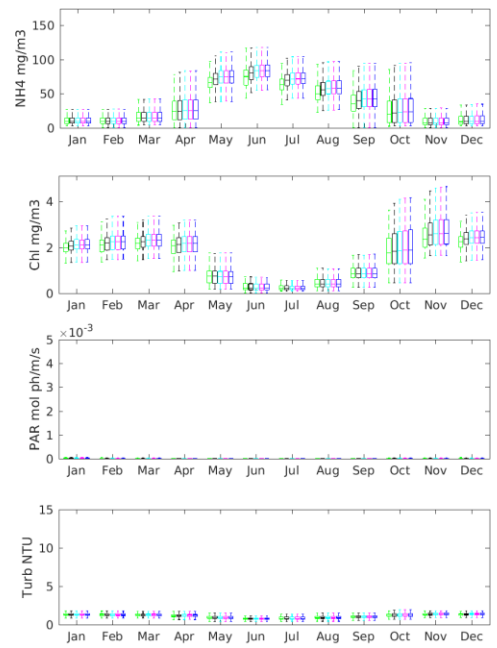
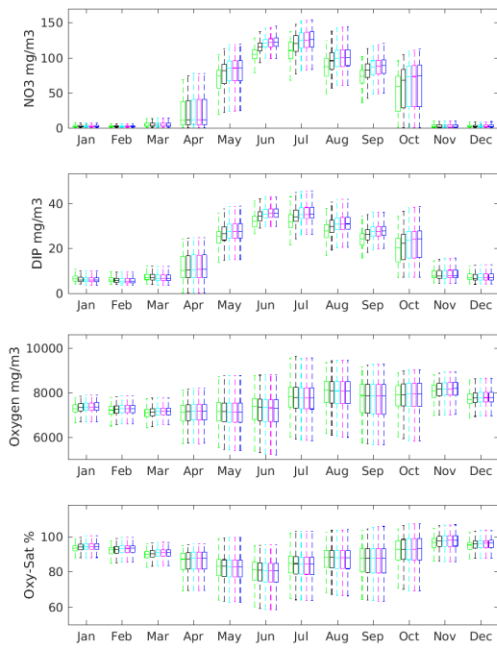
### C7 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



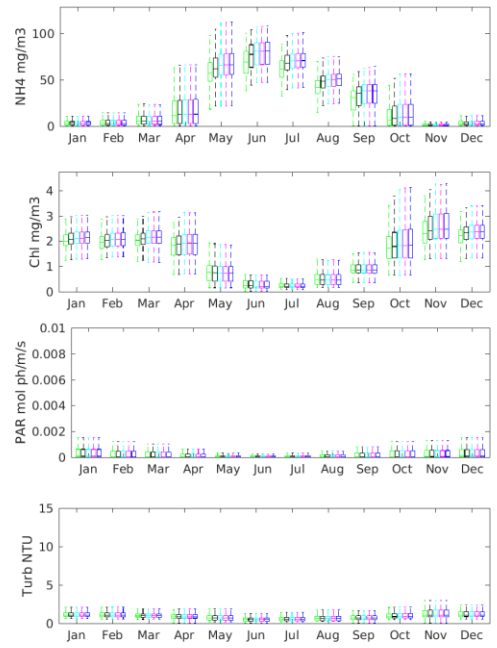
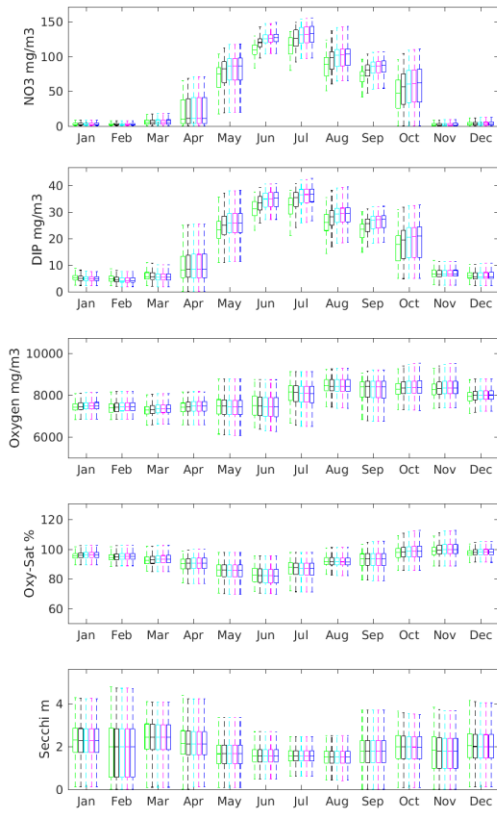
### C6 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



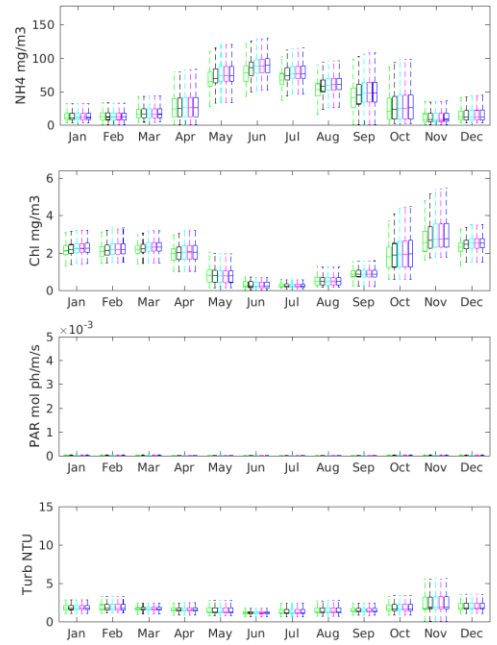
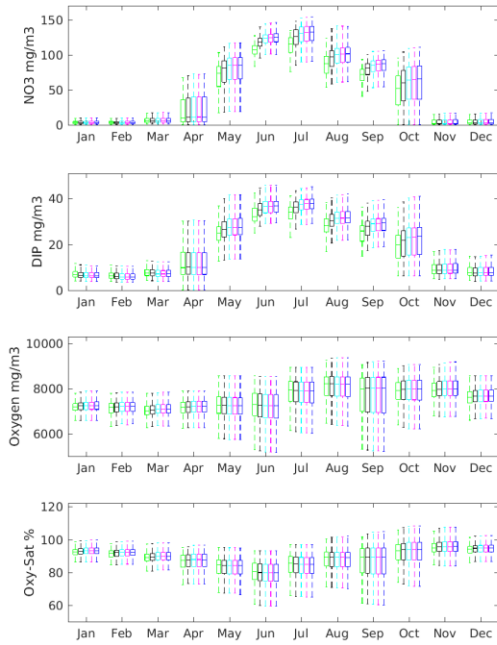
### C6 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB

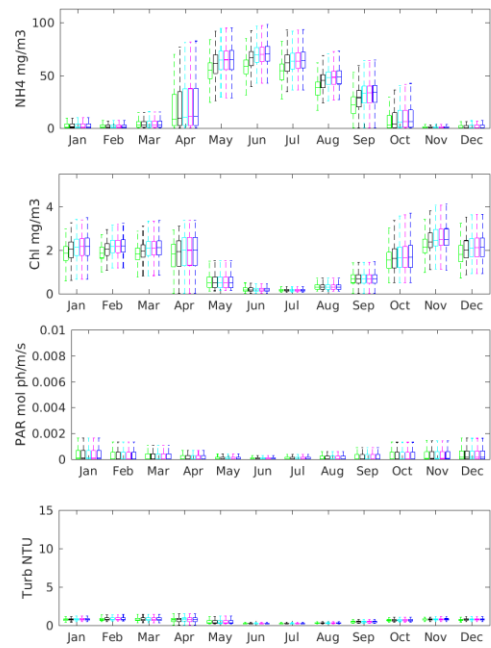
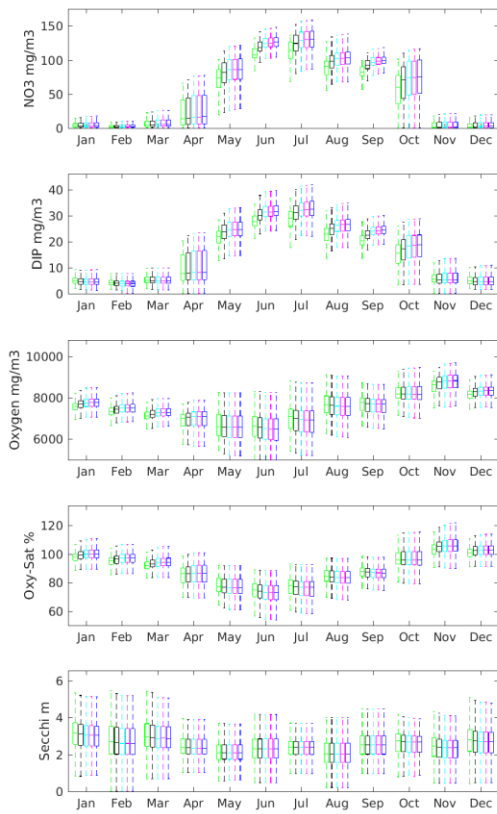
### C5 Surface



Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB

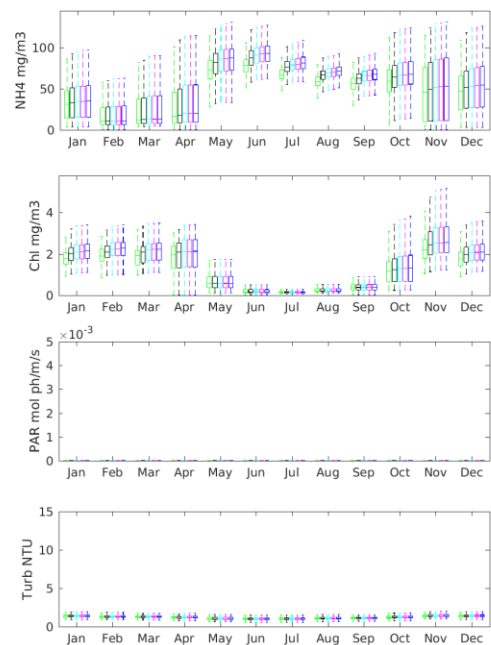
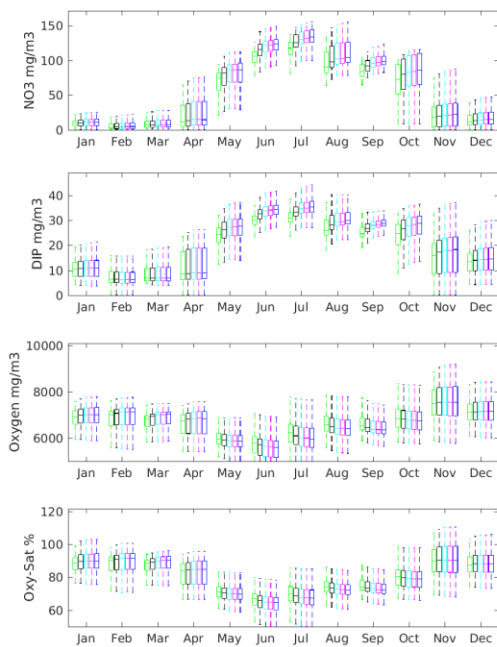
### C5 Bottom





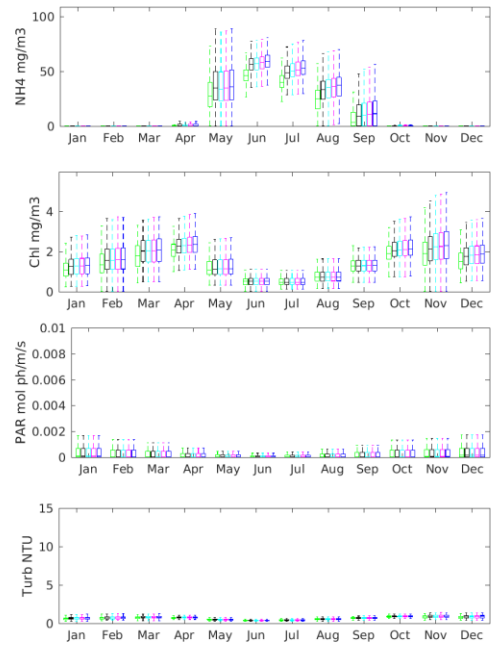
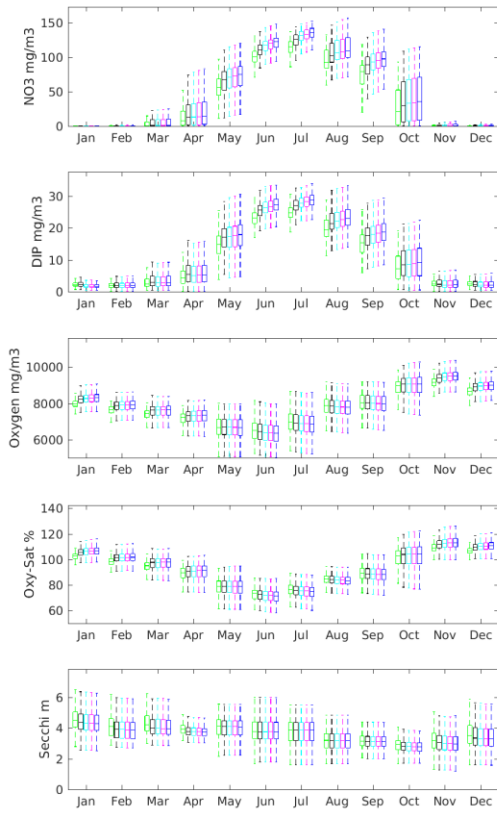
### C4 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



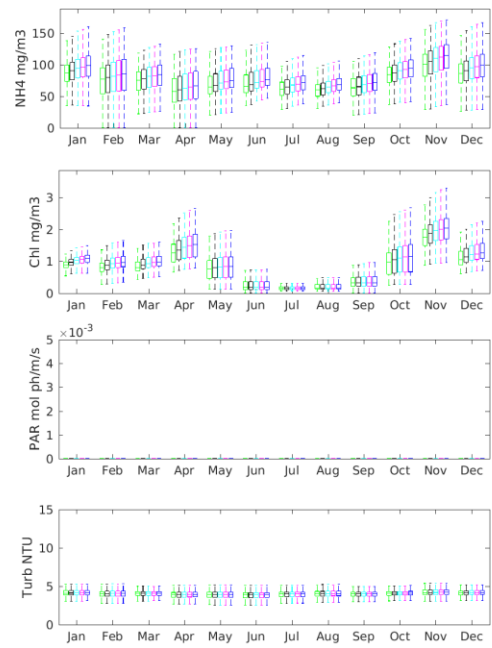
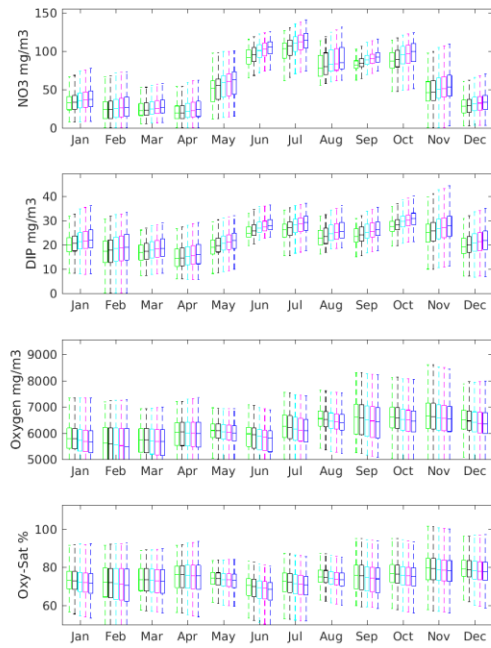
### C4 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



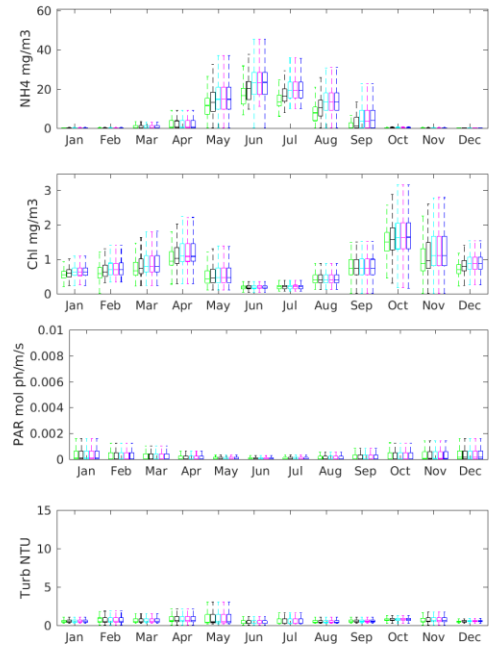
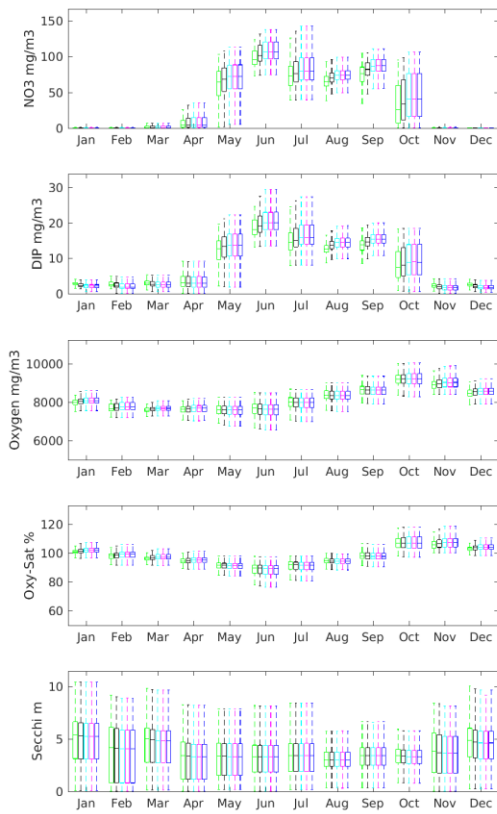
C Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



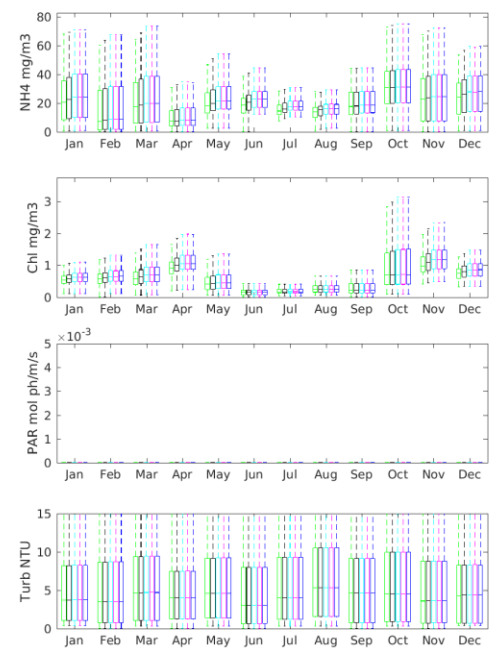
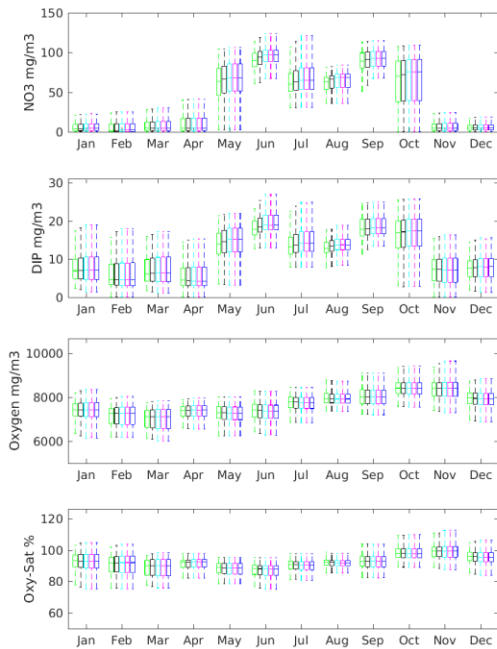
C Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



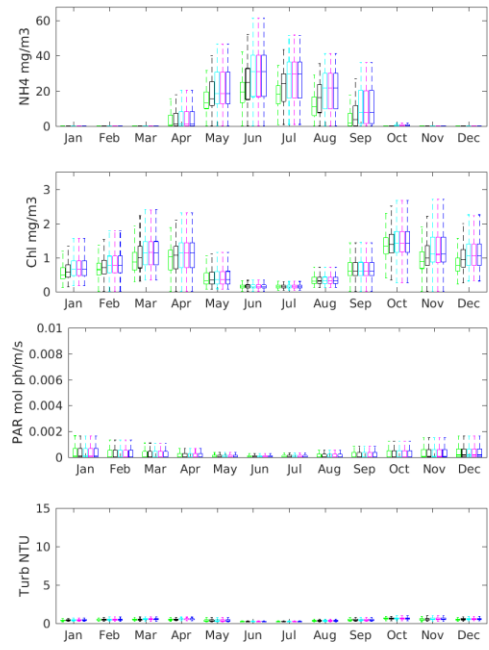
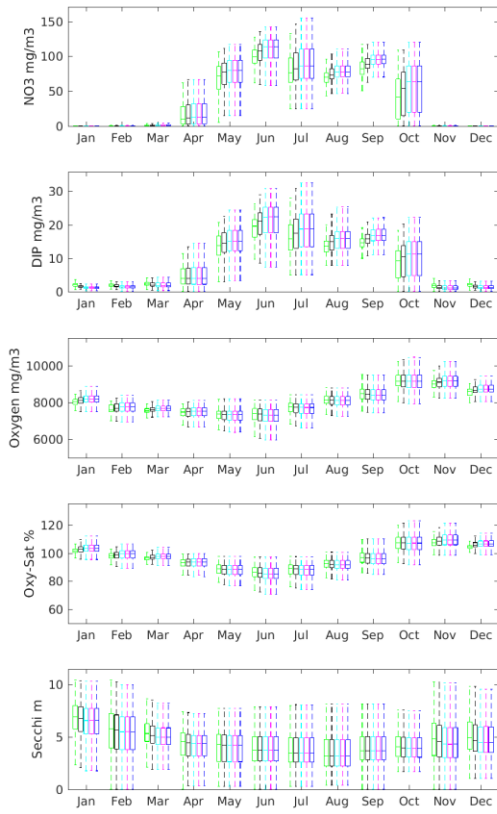
### BG\_2 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



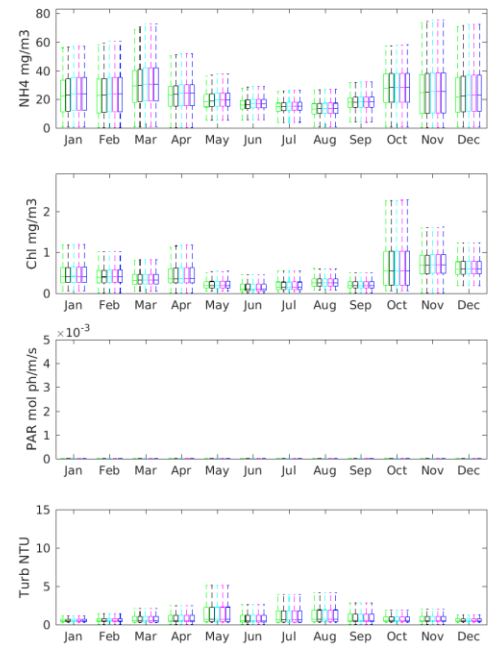
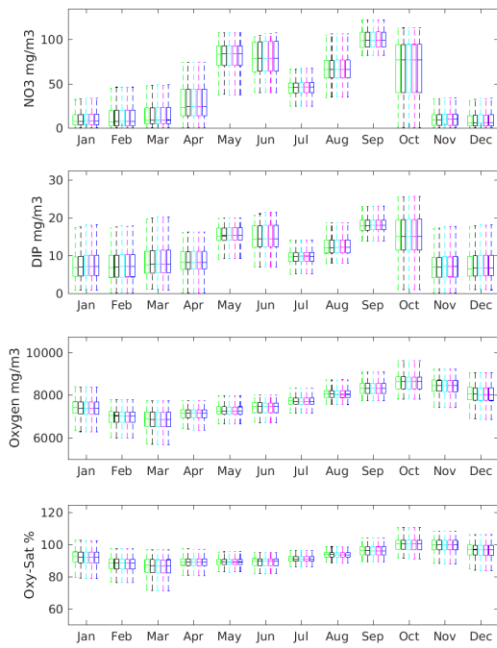
### BG\_2 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



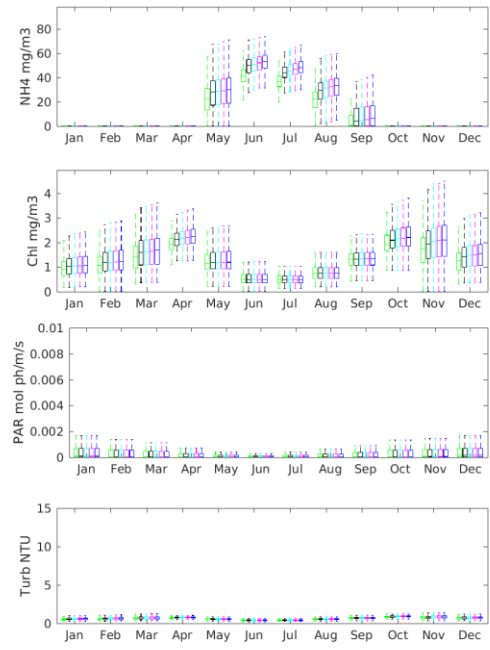
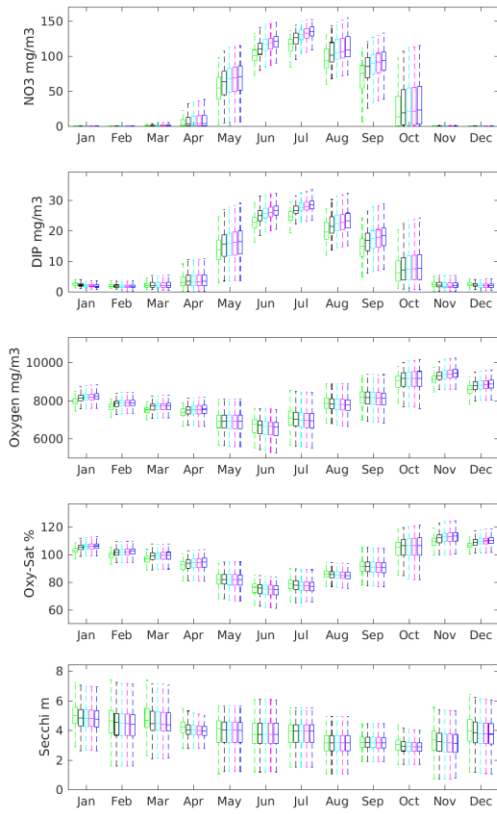
### BG\_1 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



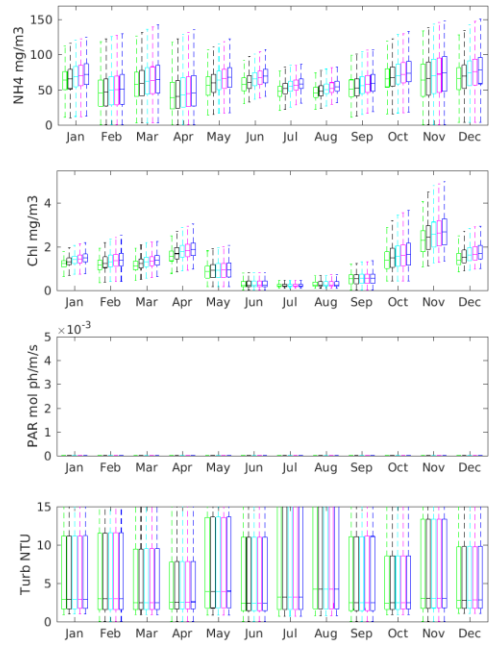
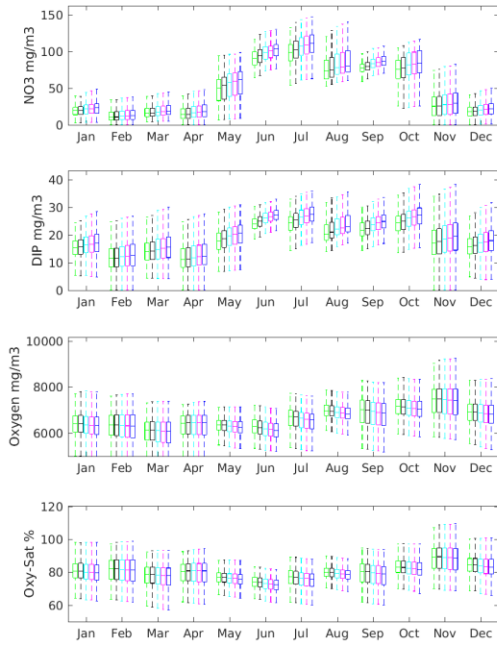
### BG\_1 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



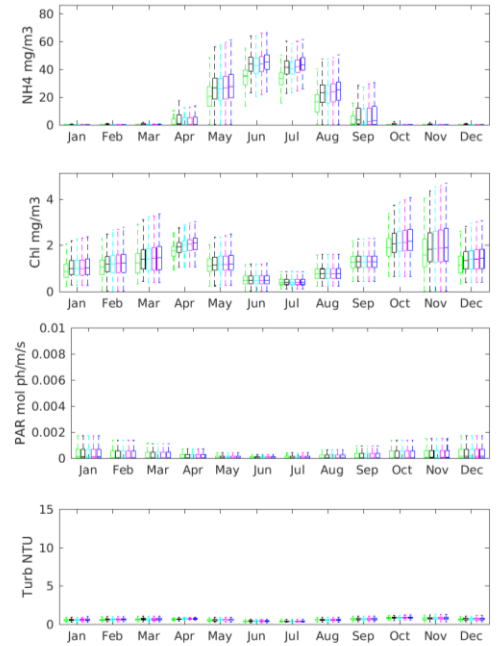
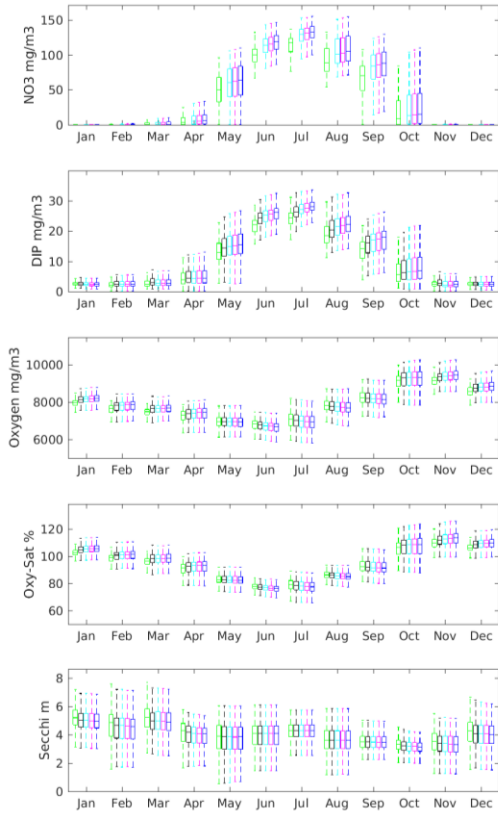
### B3 Surface

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



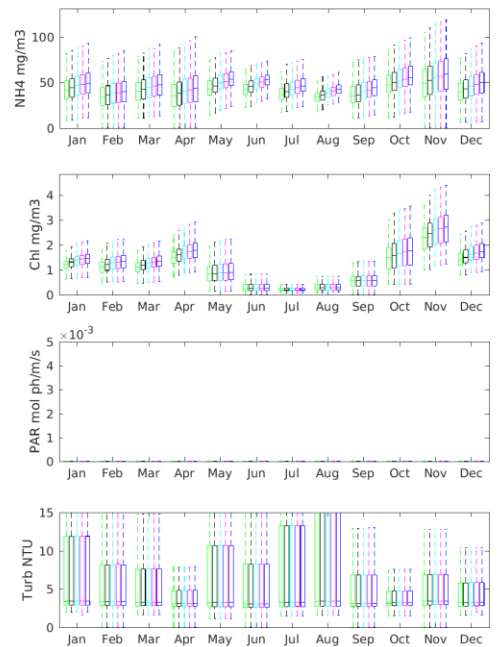
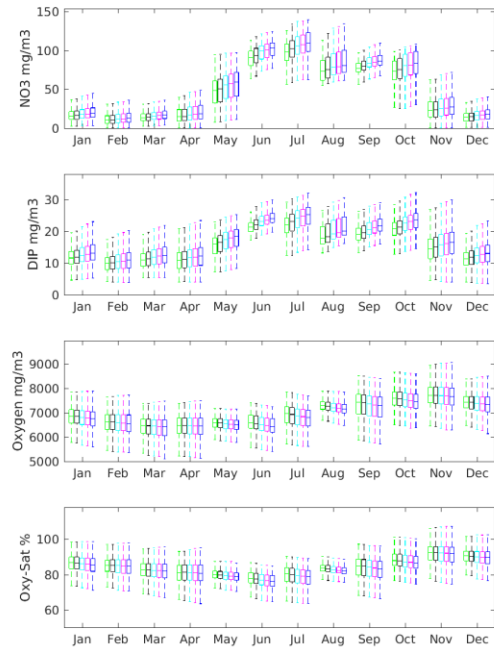
### B3 Bottom

Pre Develop  
 Pre SB Develop  
 2020+2ktN in SB  
 2020+3ktN in SB  
 2020+4.5ktN in SB



### B1 Surface

- Pre Develop
- Pre SB Develop
- 2020+2ktN in SB
- 2020+3ktN in SB
- 2020+4.5ktN in SB



### B1 Bottom

- Pre Develop
- Pre SB Develop
- 2020+2ktN in SB
- 2020+3ktN in SB
- 2020+4.5ktN in SB

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