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Warnemünde

Contribution of rivers Odra and Vistula to the Baltic Sea carbon cycle

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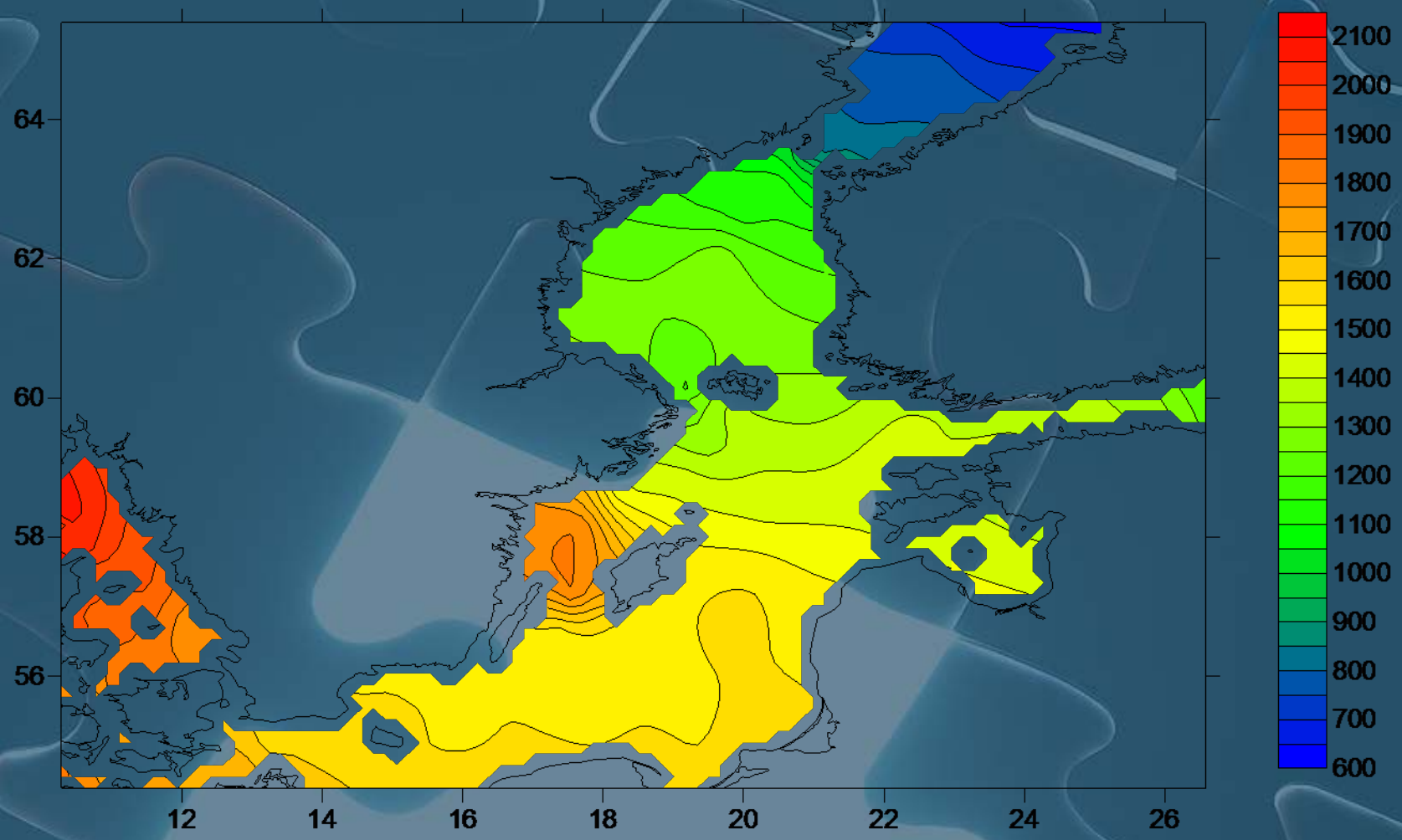
Baltic DIC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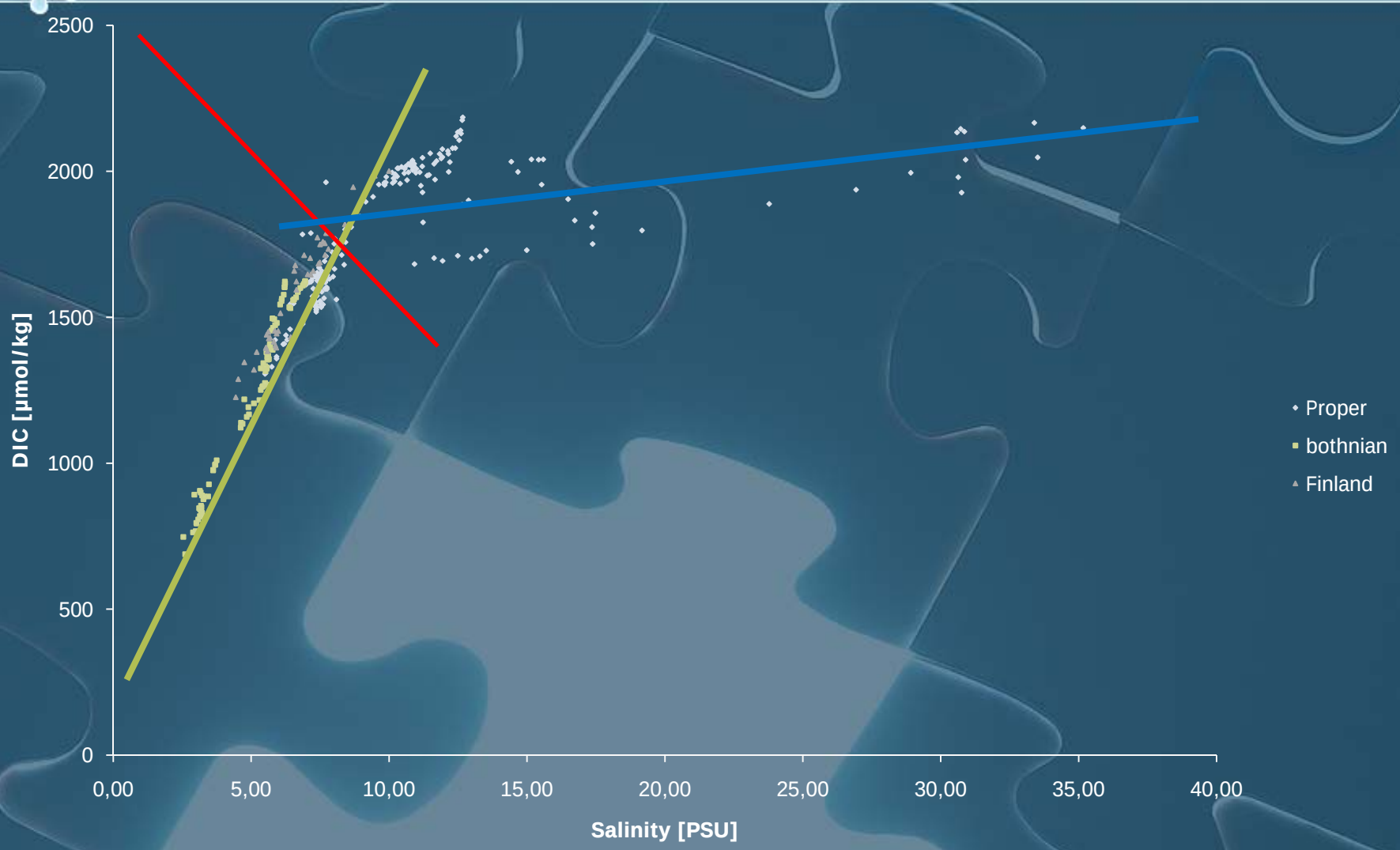
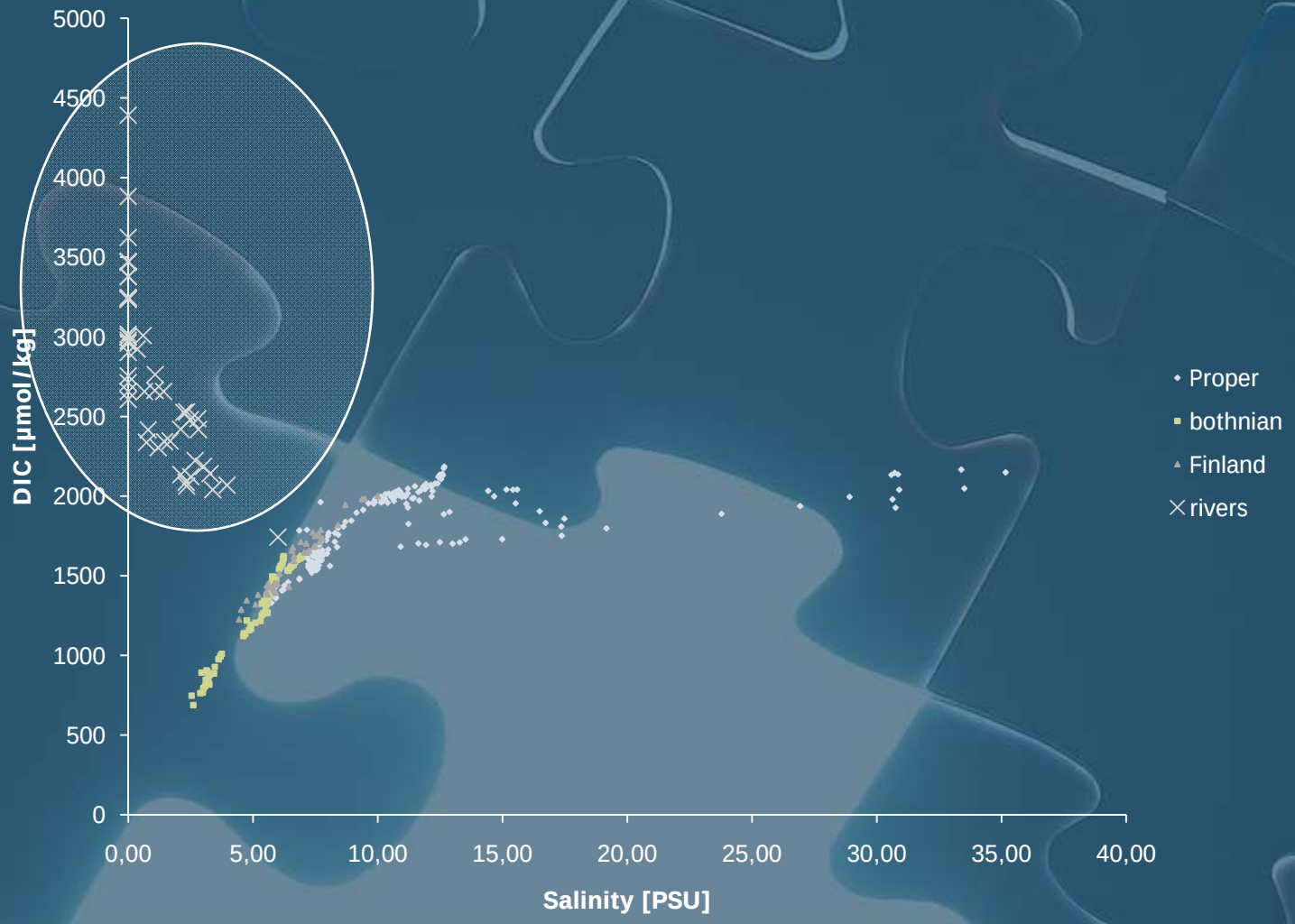
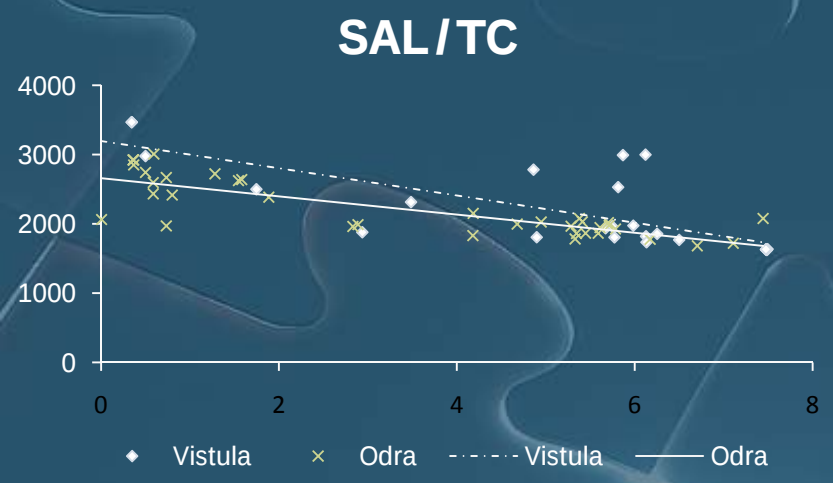
Baltic inflow approximation

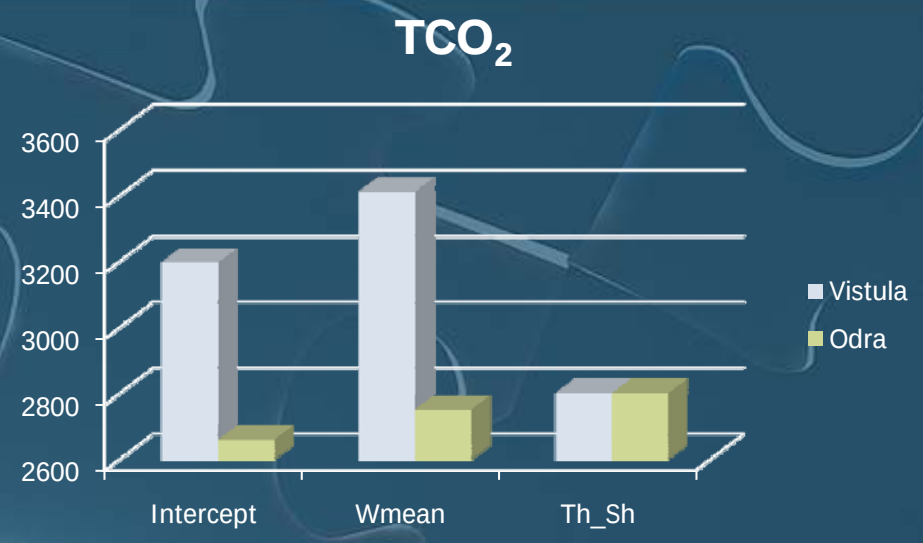


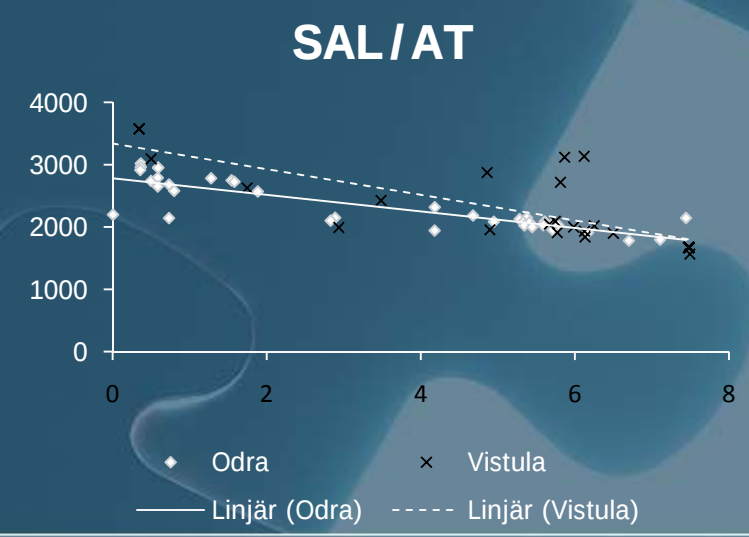
Southern Baltic rivers

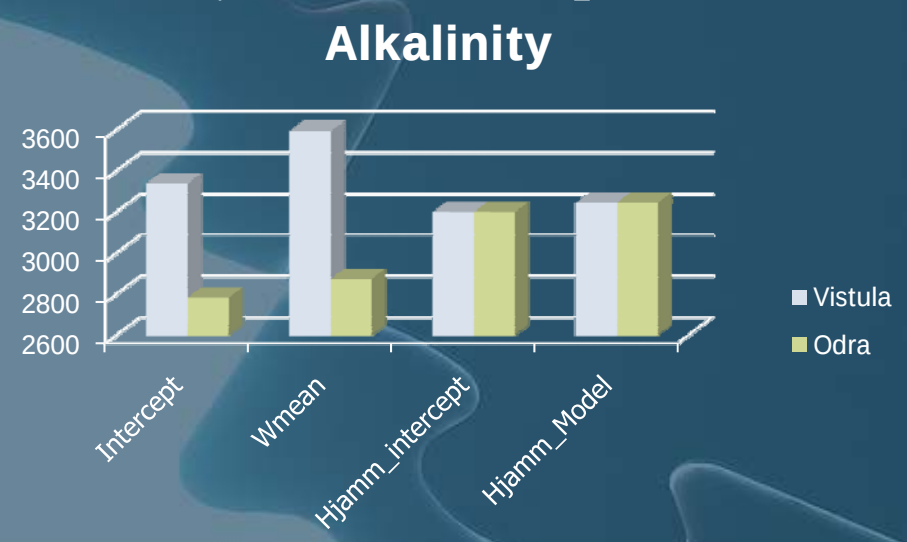


Intercept vs data

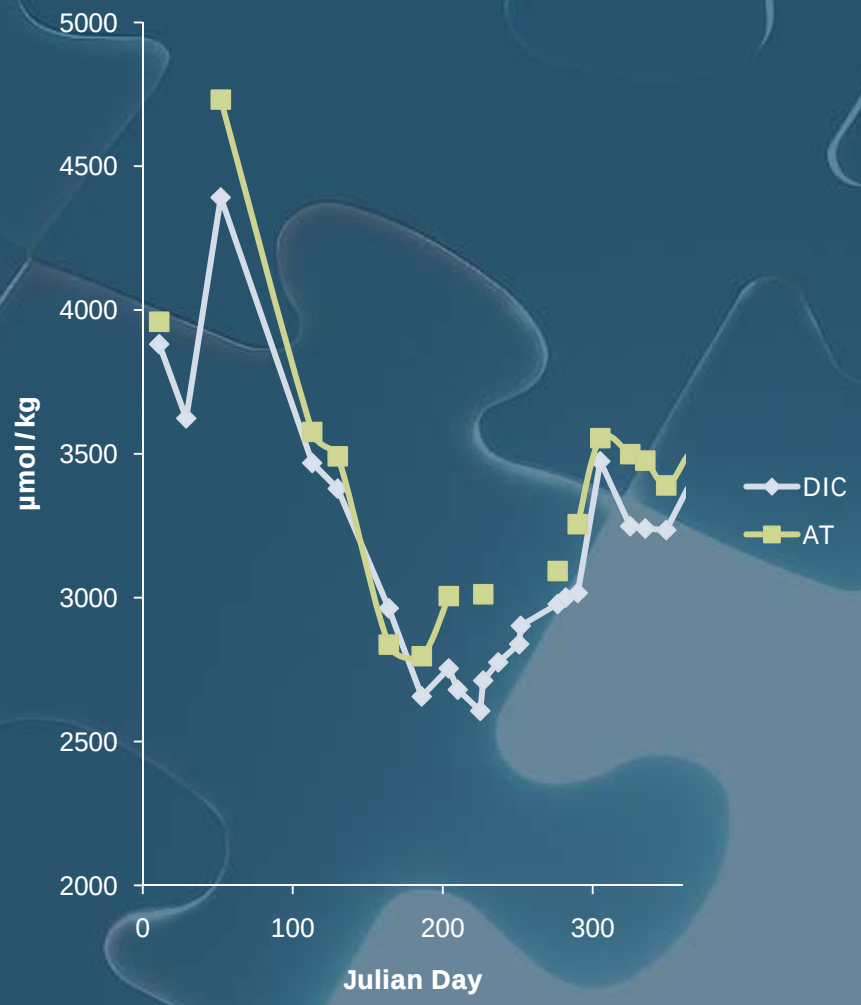


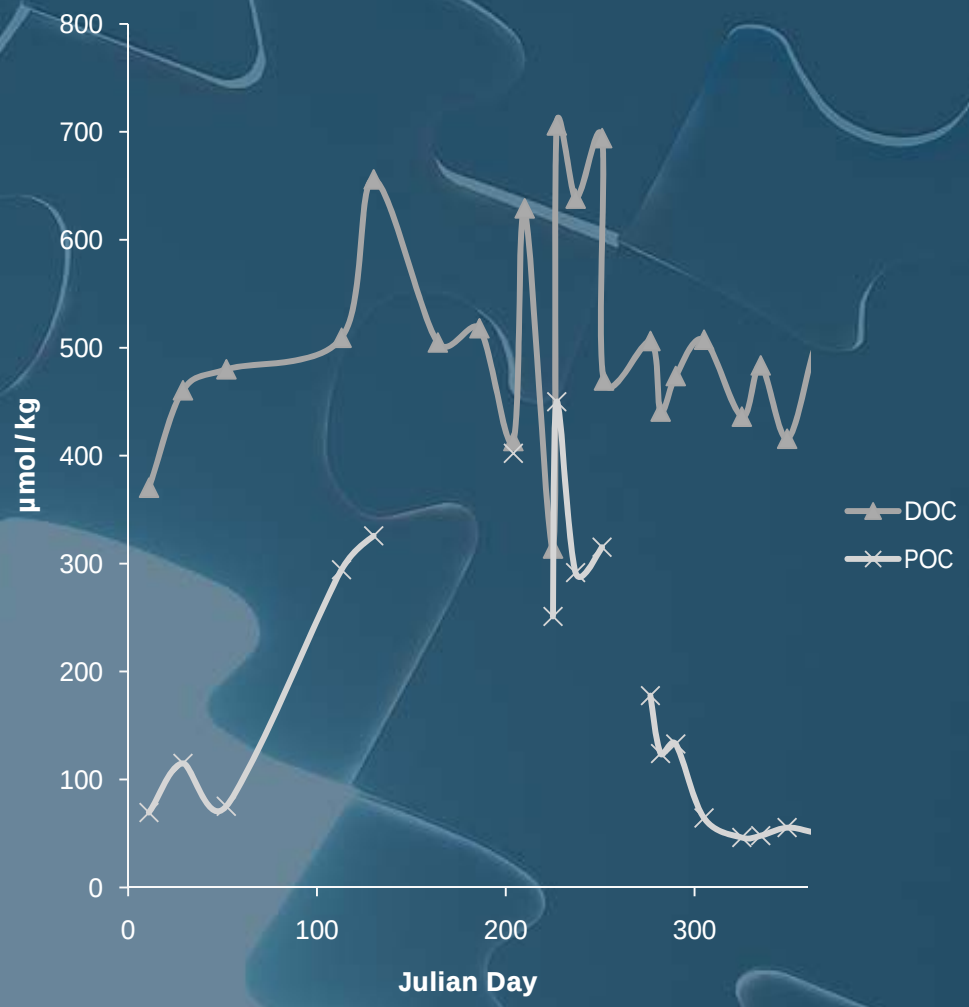




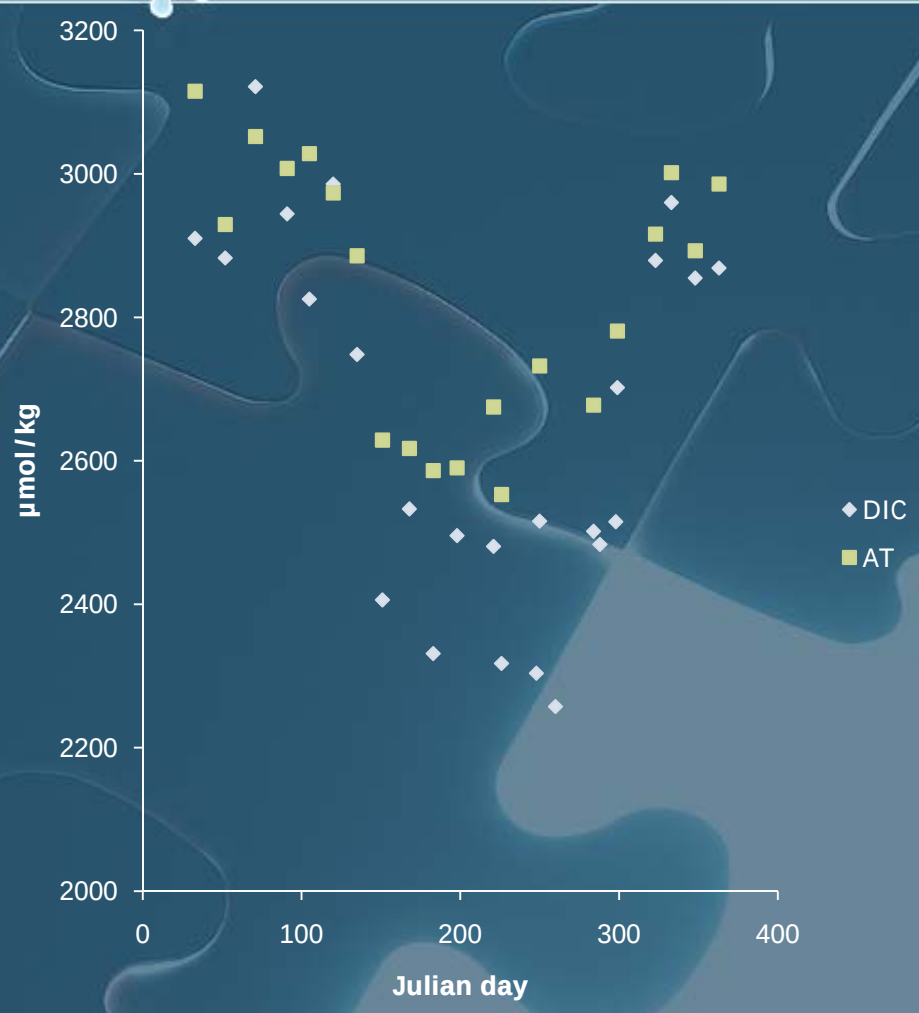


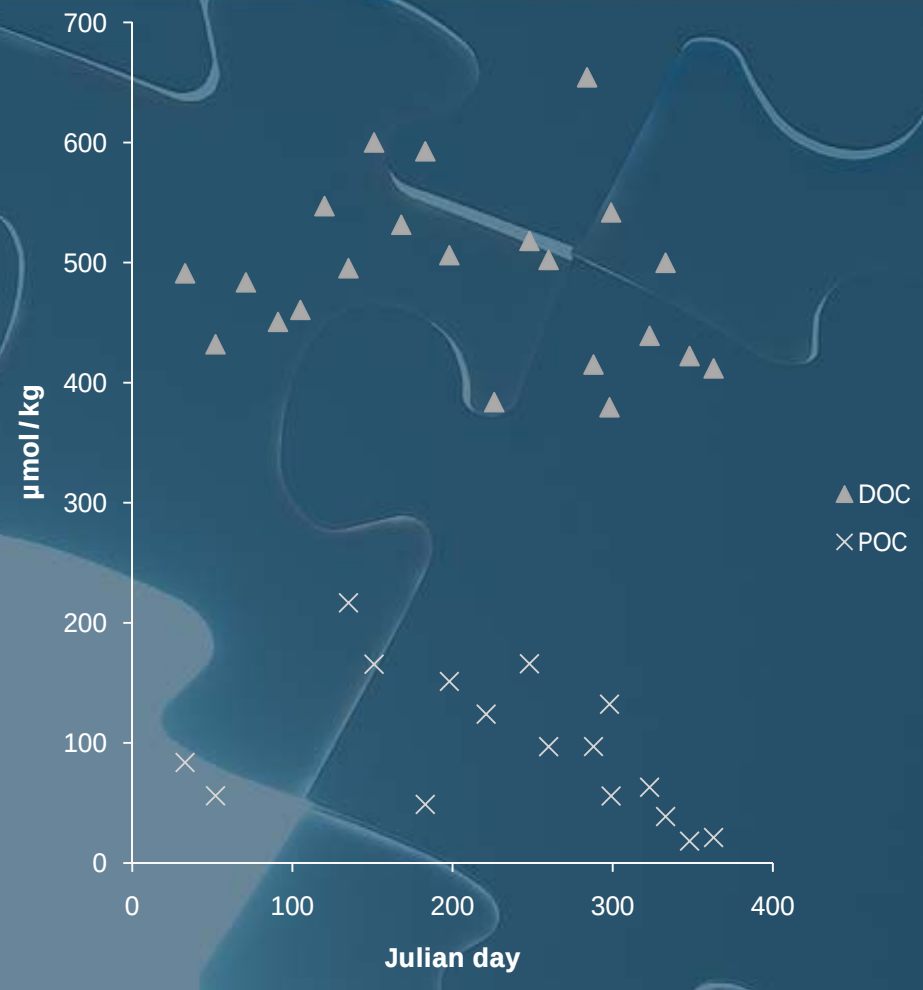
Results - Vistula



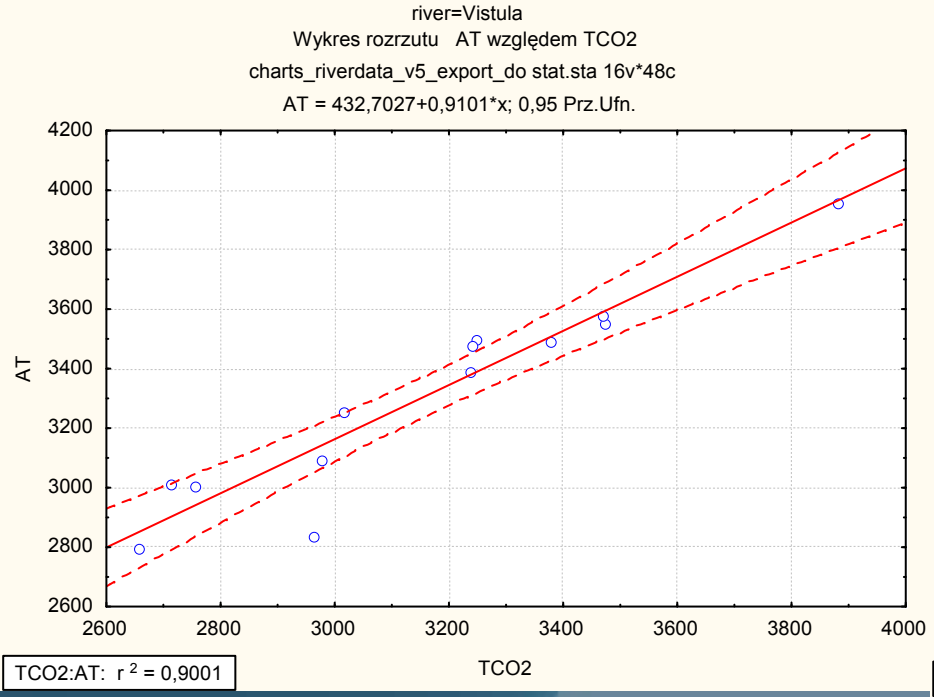


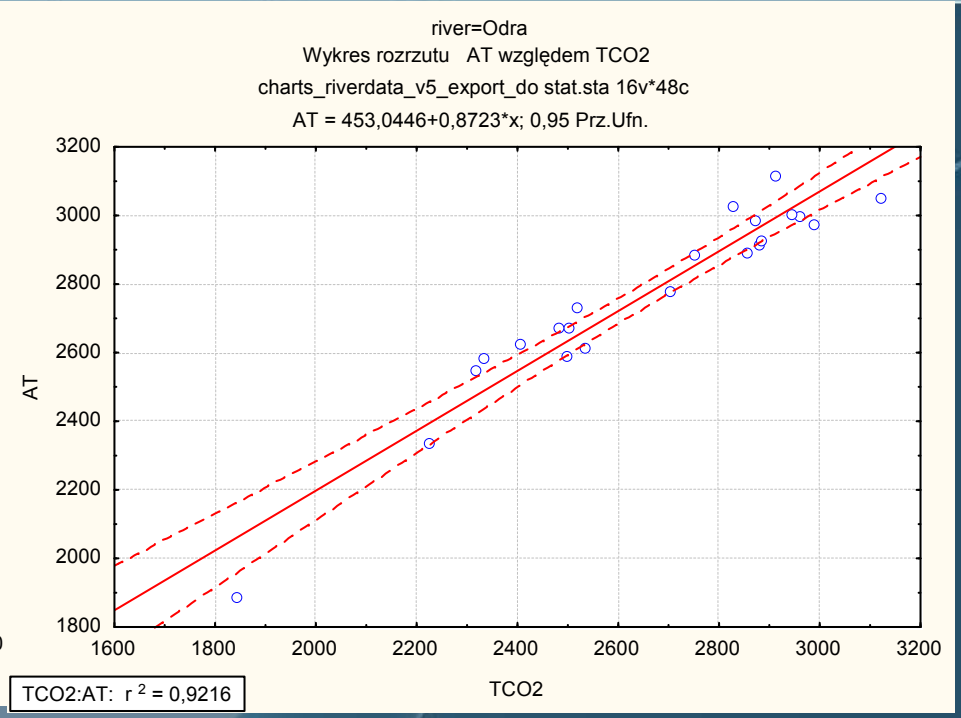
Results Odra



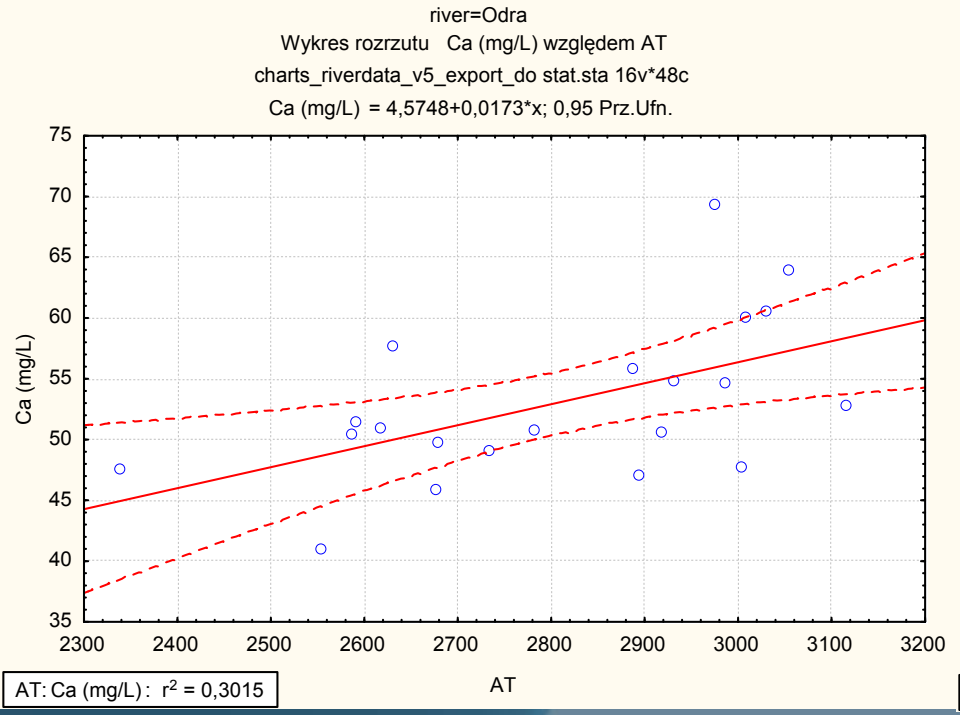


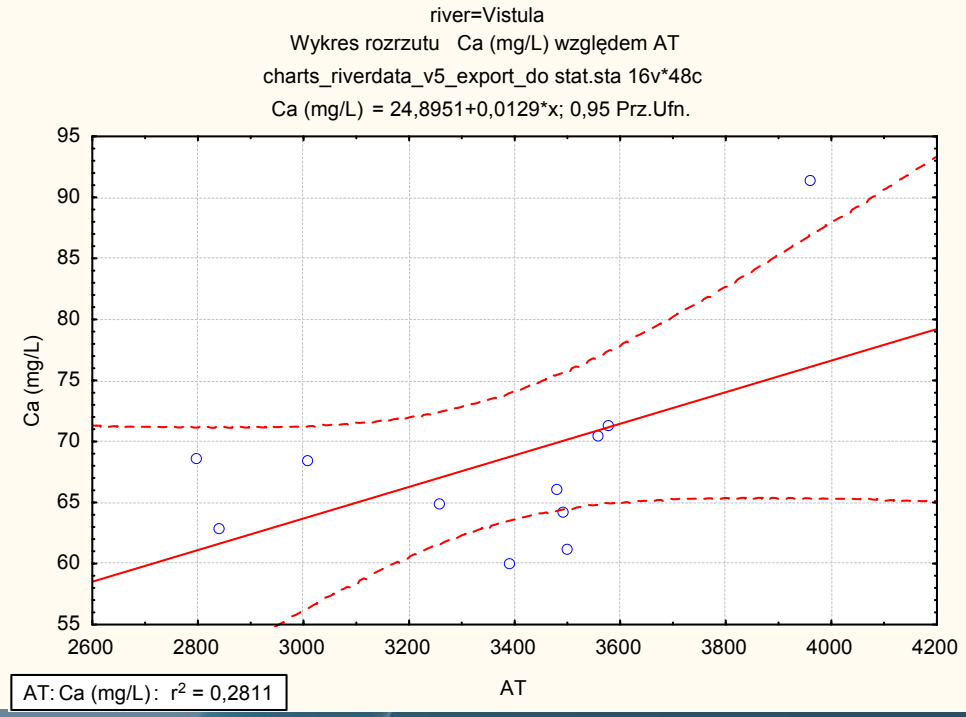
CT vs AT


river=Vistula
Wykres rozrzutu AT względem TCO2
charts_riverdata_v5_export_do stat.sta 16v*48c
AT = 432,7027+0,9101*x; 0,95 Prz.Ufn.
AT
TCO2
TCO2:AT: r 2 = 0,9001

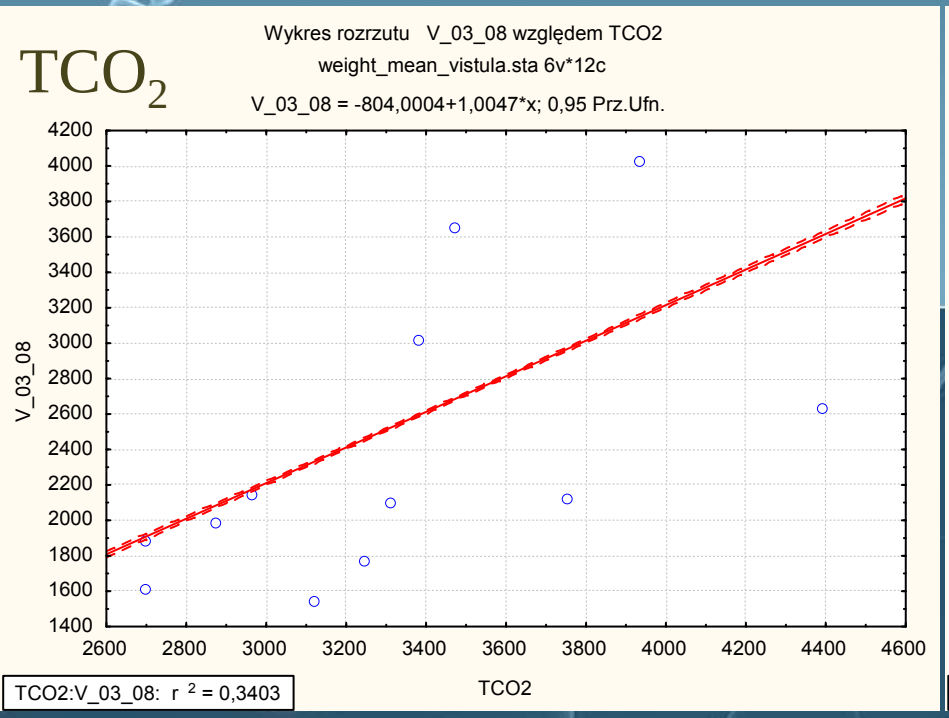

river=Odra
Wykres rozrzutu AT względem TCO2
charts_riverdata_v5_export_do stat.sta 16v*48c
AT = 453,0446+0,8723*x; 0,95 Prz.Ufn.
AT
TCO2
TCO2:AT: r 2 = 0,9216

AT vs Ca

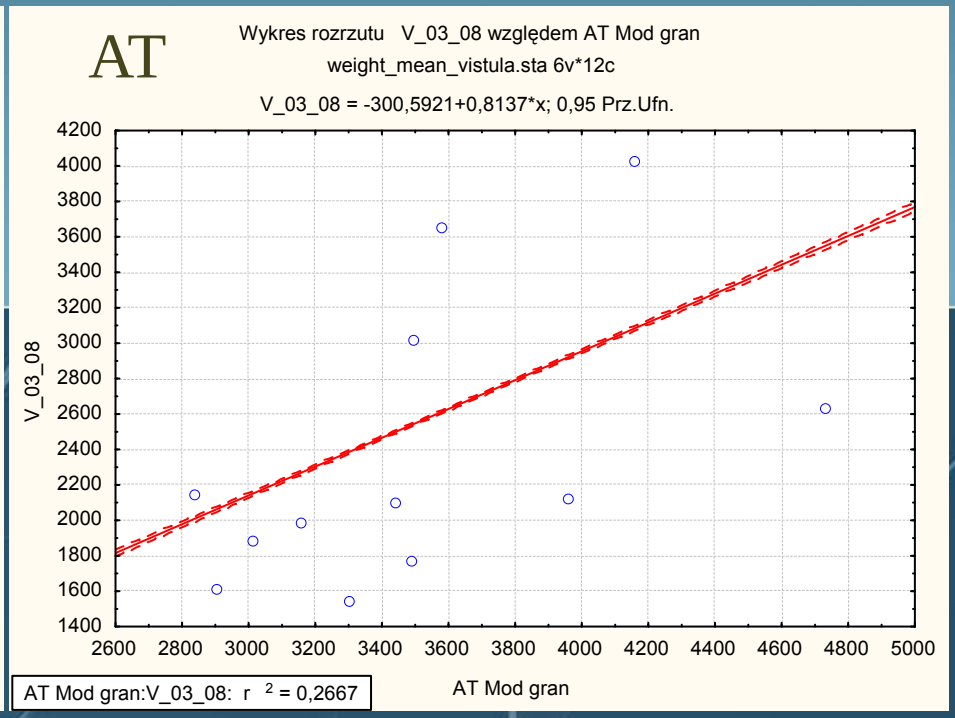

river=Odra
Wykres rozrzutu Ca (mg/L) względem AT
charts_riverdata_v5_export_do stat.sta 16v*48c
Ca (mg/L) = 4,5748+0,0173*x; 0,95 Prz.Ufn.
Ca (mg/L)
AT
AT: Ca (mg/L): r2 = 0,3015


river=Vistula
Wykres rozrzutu Ca (mg/L) względem AT
charts_riverdata_v5_export_do stat.sta 16v*48c
Ca (mg/L) = 24,8951+0,0129*x; 0,95 Prz.Ufn.
Ca (mg/L)
AT
AT: Ca (mg/L): r2 = 0,2811

TCO_2

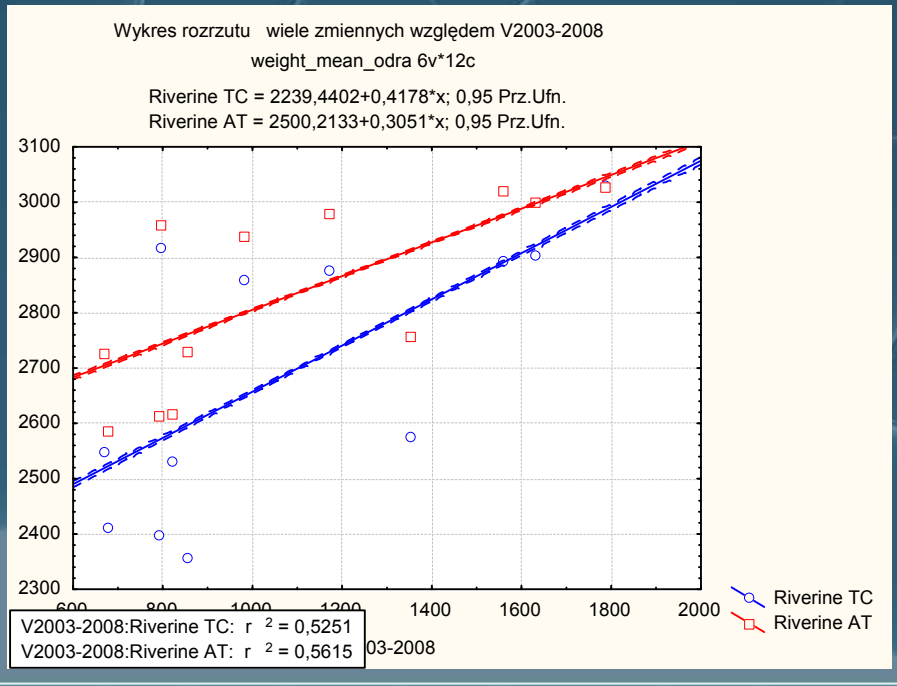


AT

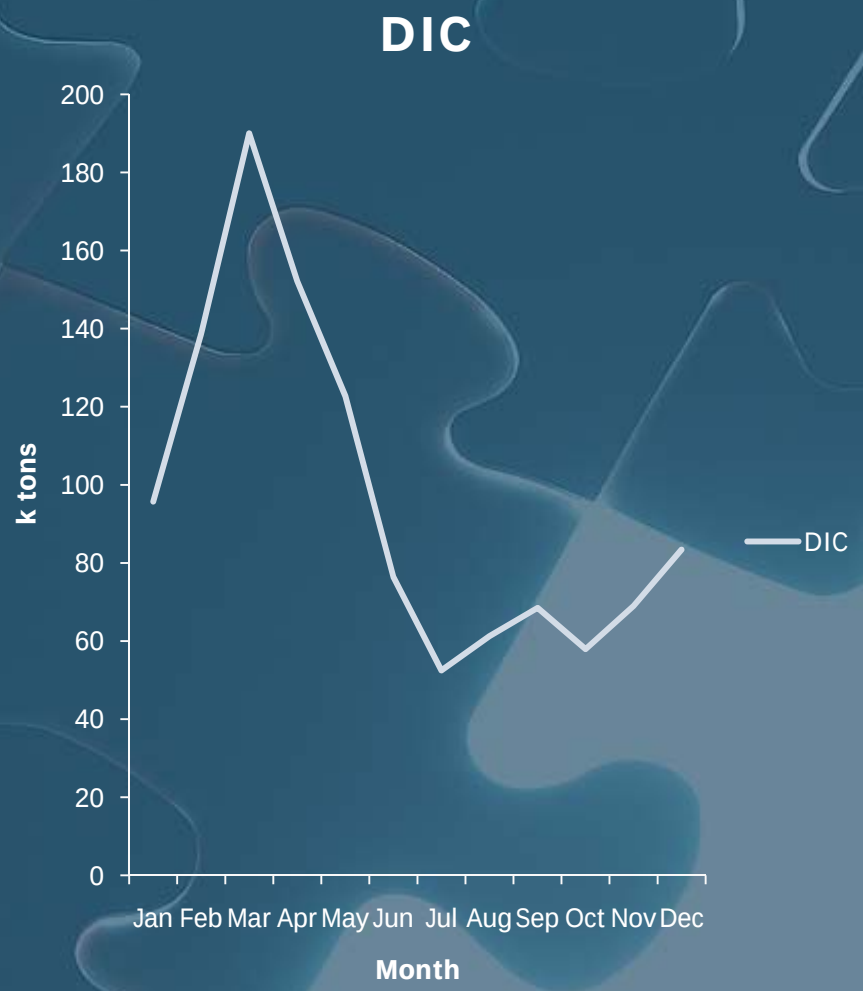


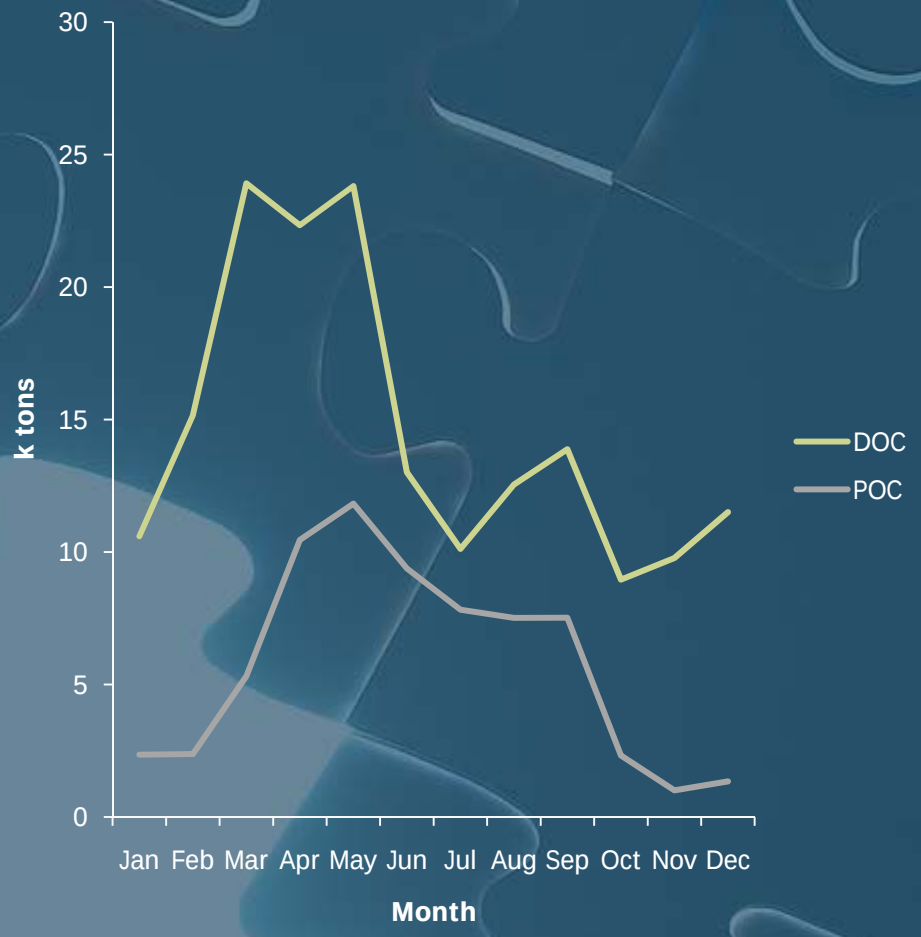
Vistula

Odra

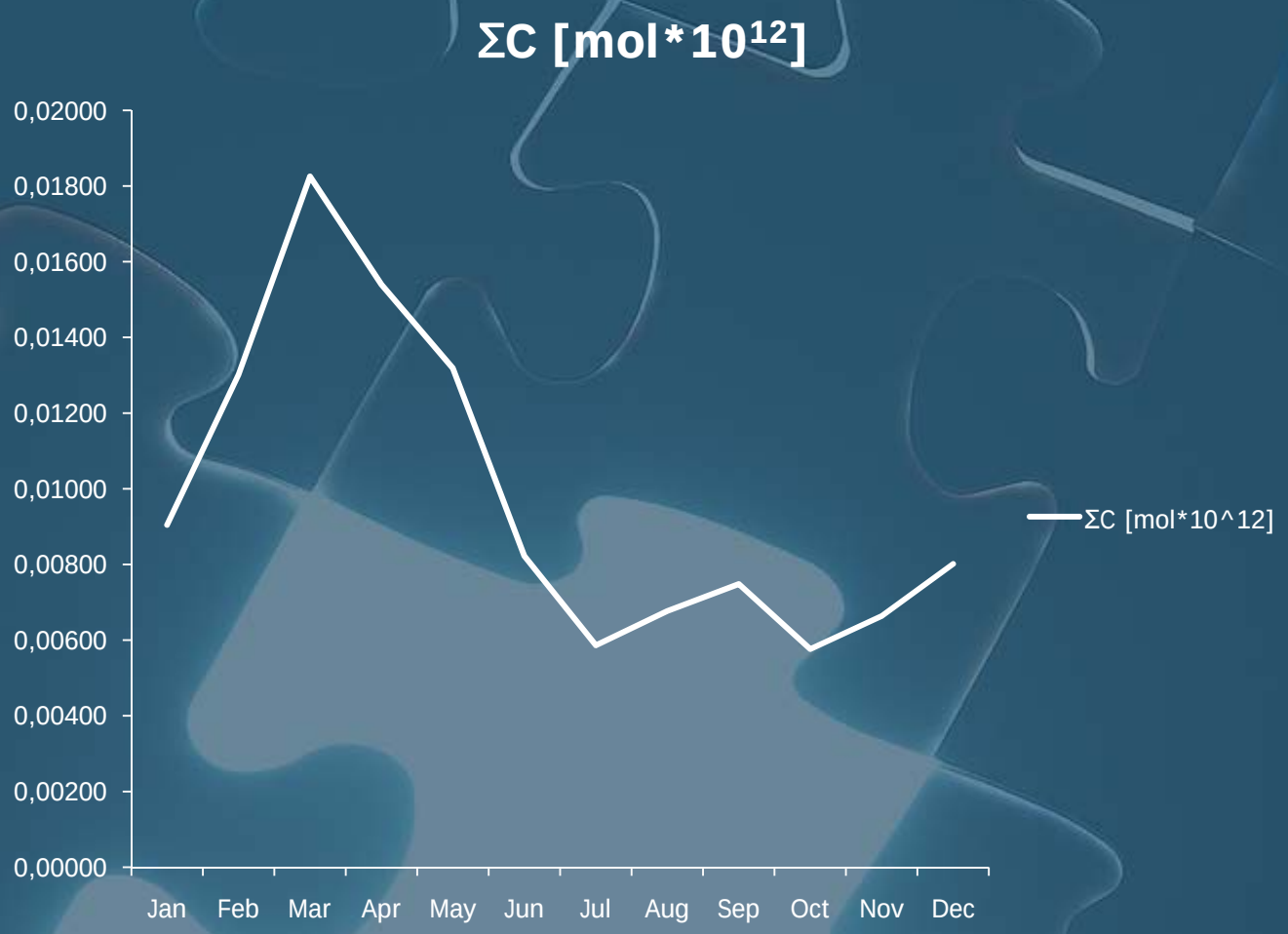


Loading Vistula





Total Load Vistula



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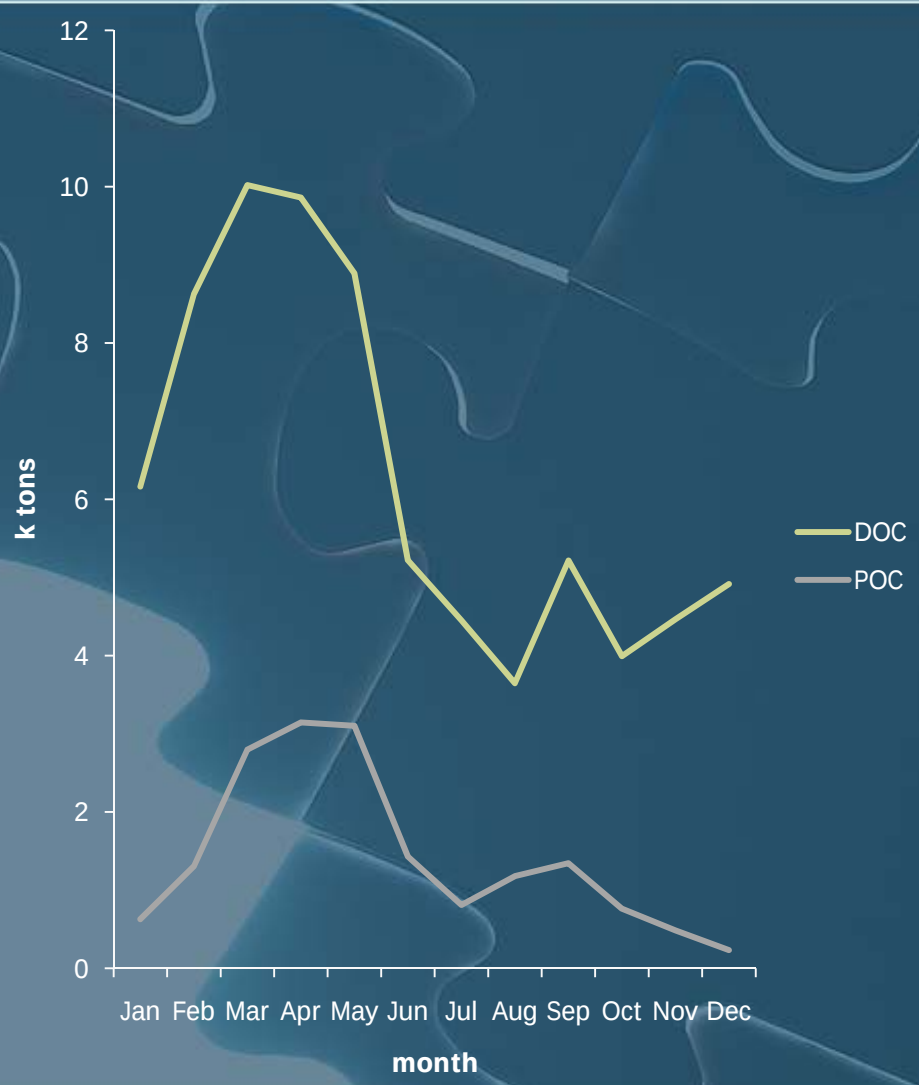
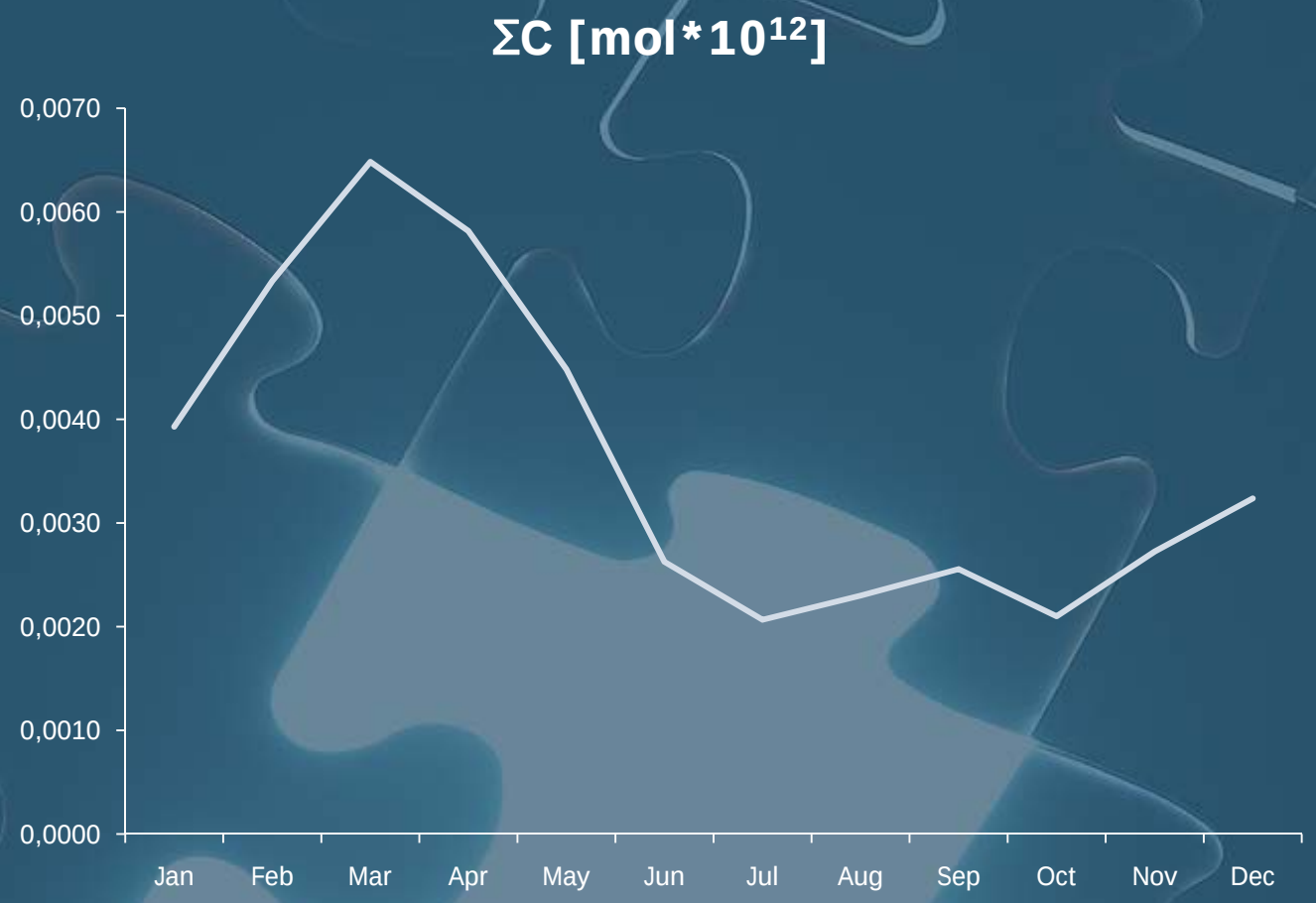


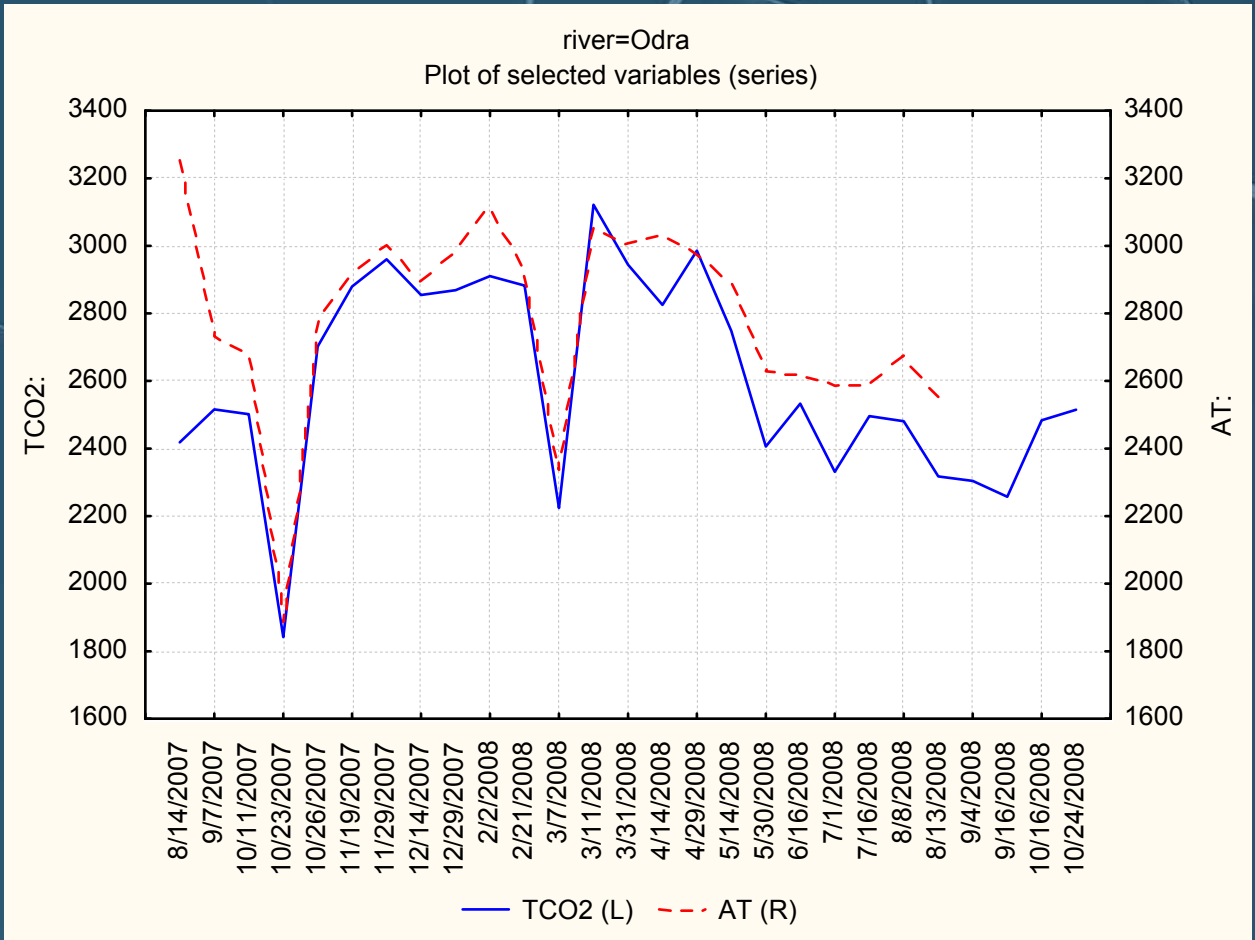
Total Load Odra



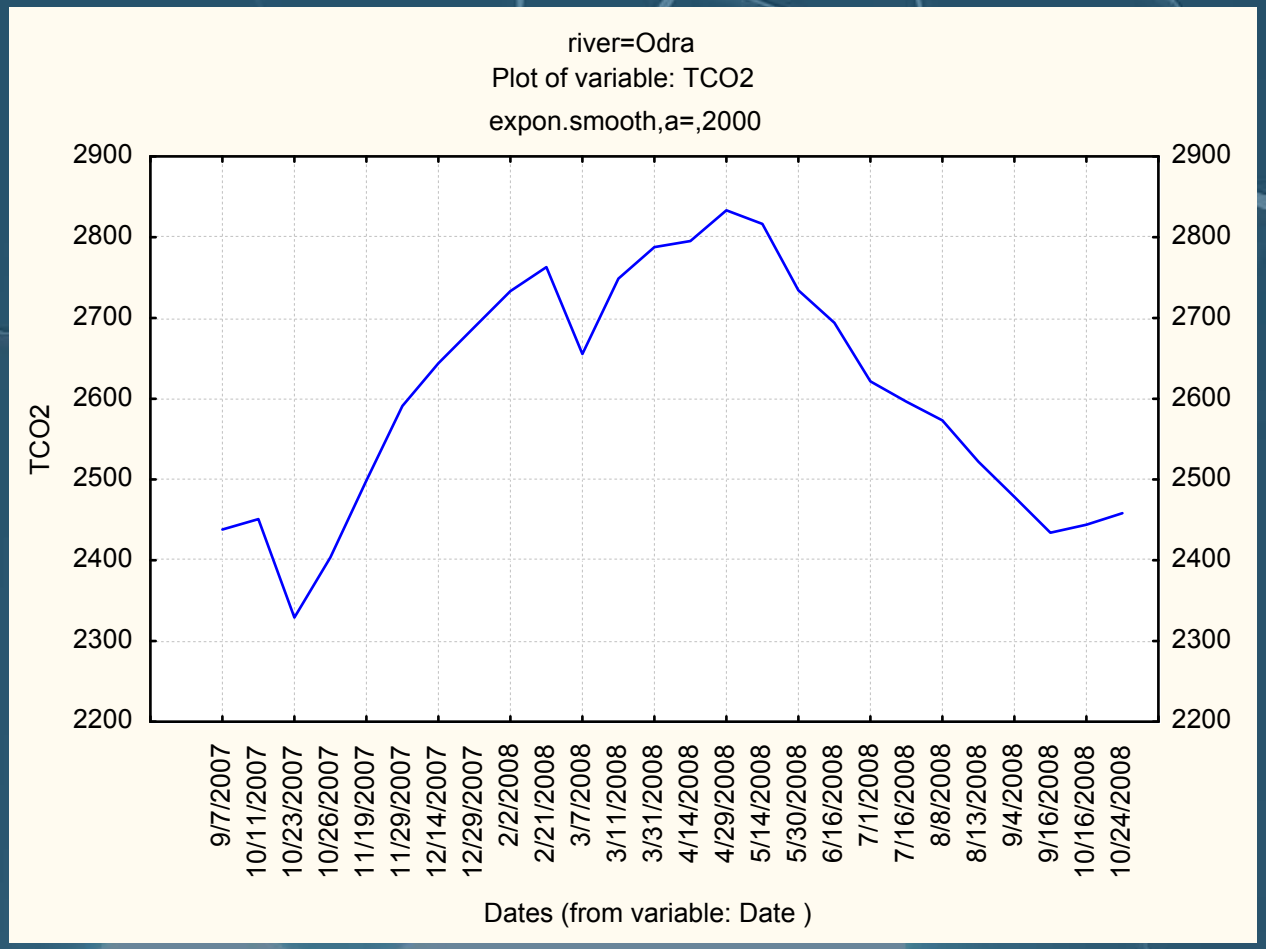
Conclusions

- Weathering seem to be more important in Odra than Vistula
- Vistula and Odra provide 40% of C attributed to ‘Continental rivers’
- DIC gradients need to be refined in the Baltic Proper (in progress)
- Sink/Source balance will change (in progress)

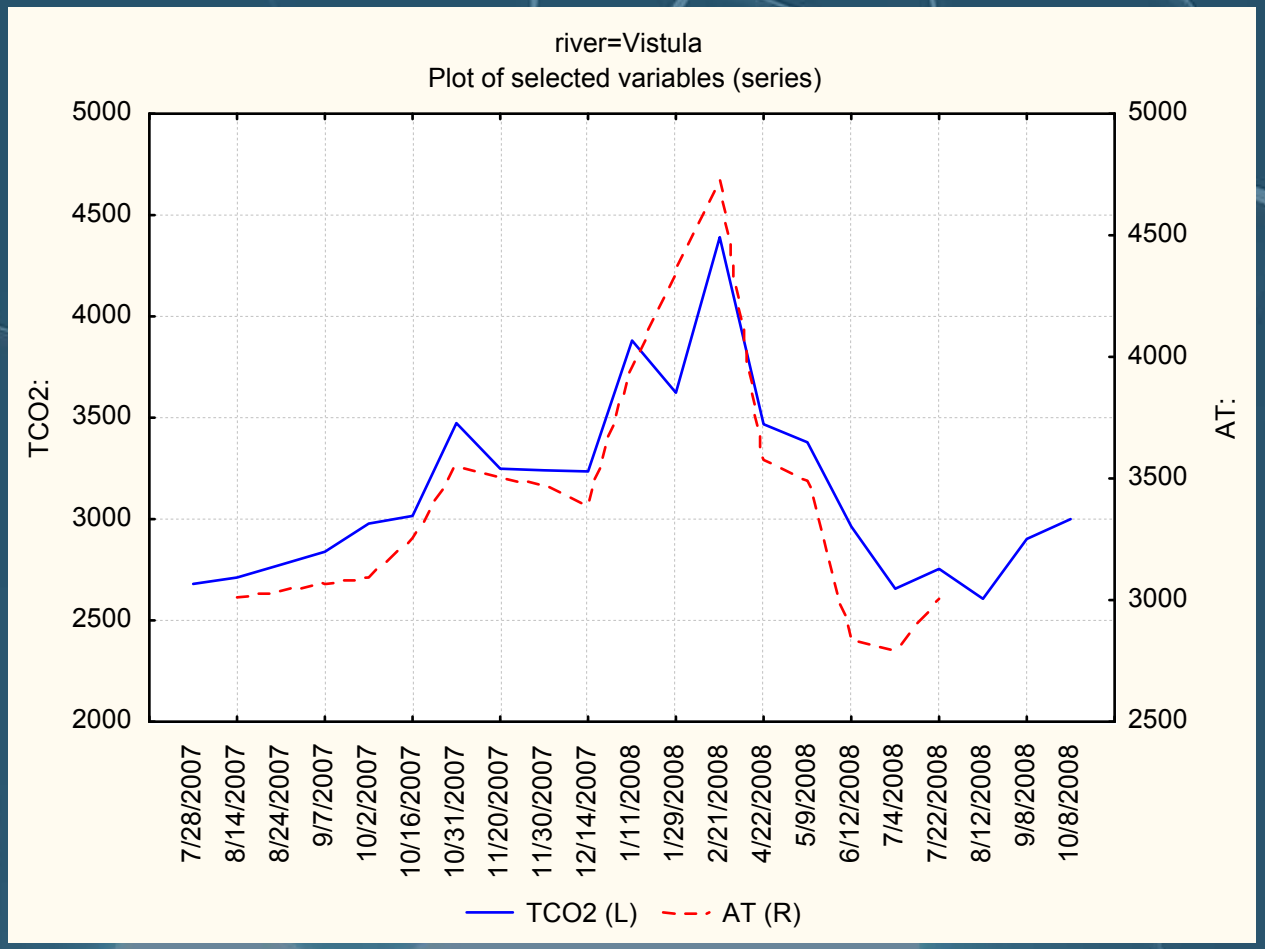
AT and TCO2 time series



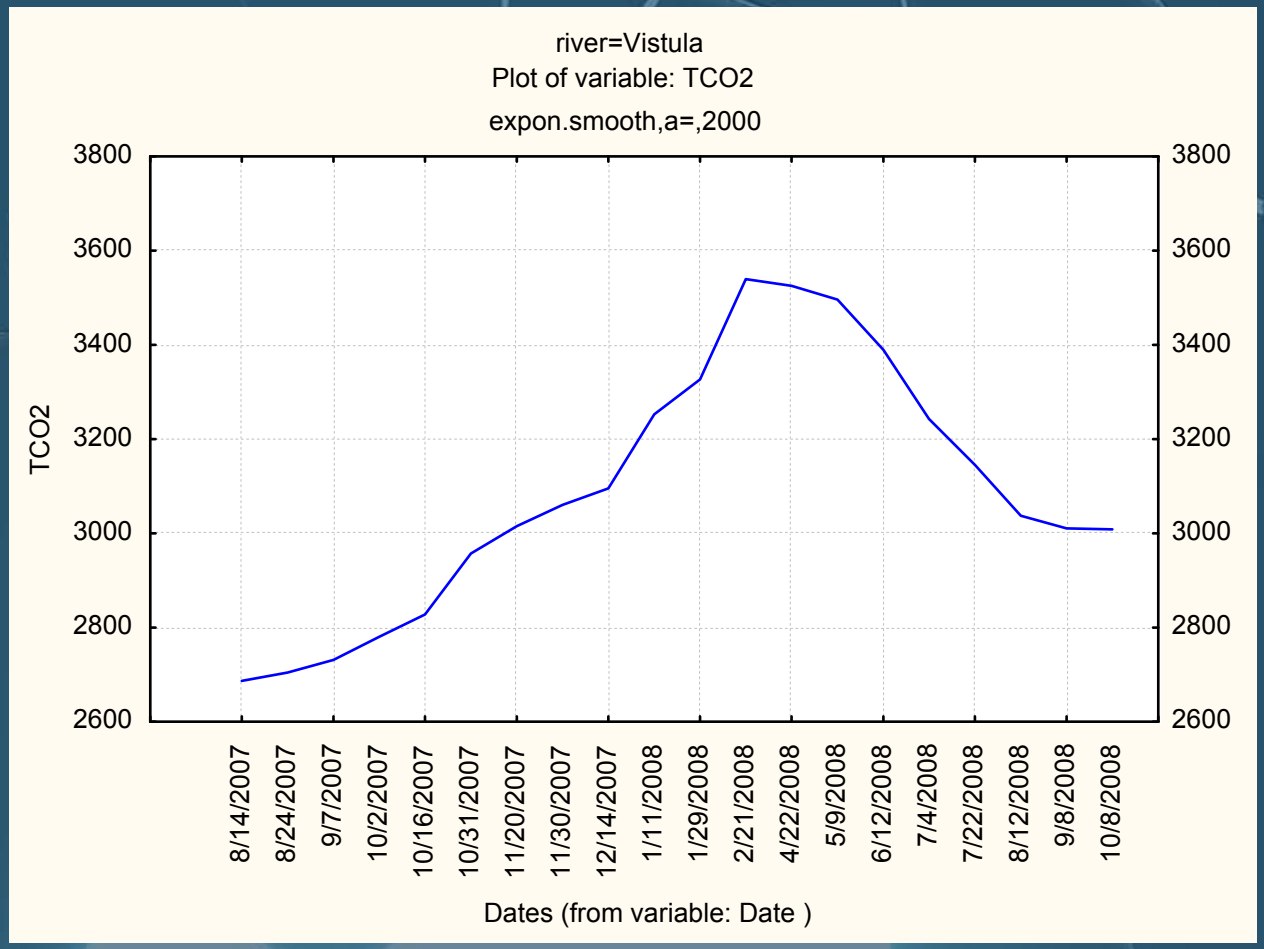
TCO2 smoothing



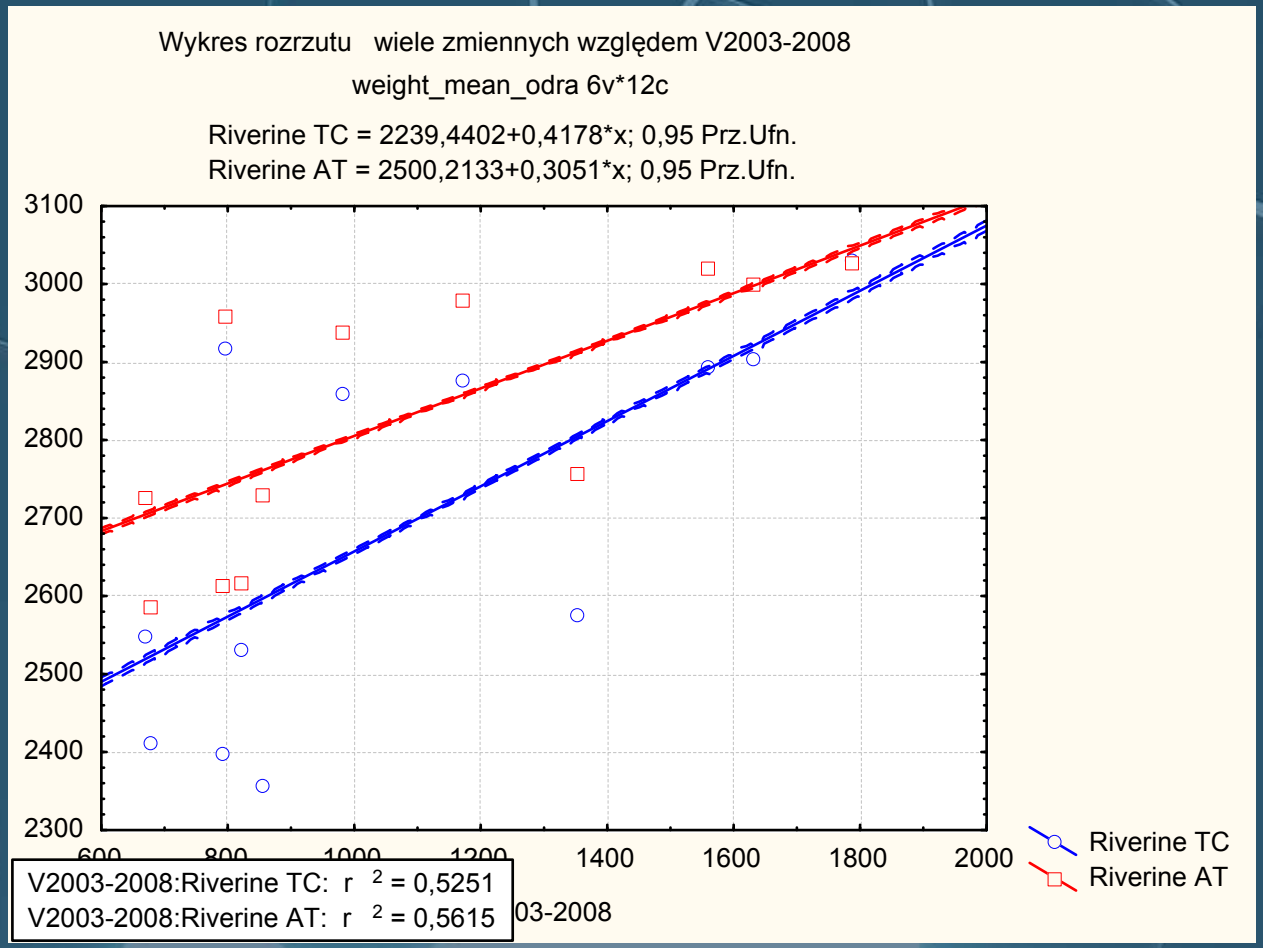
Vistula time series



Vistula smoothing



AT and CT vs Load Odra



Load vs AT Vistula