Criteria Assessment Procedure for Climate Change Scenarios

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Modeling Group Conference Call
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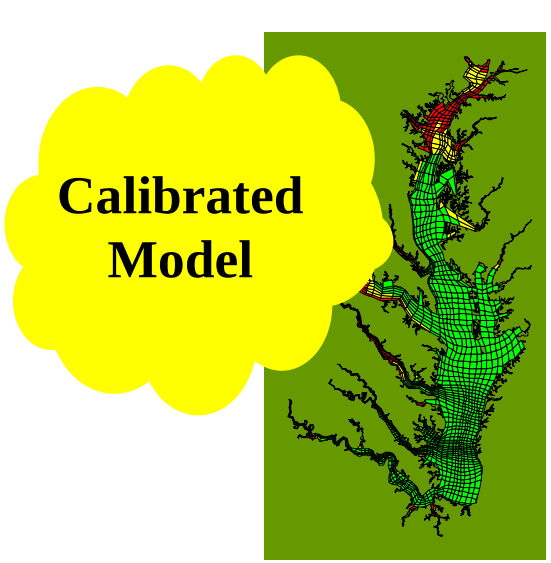
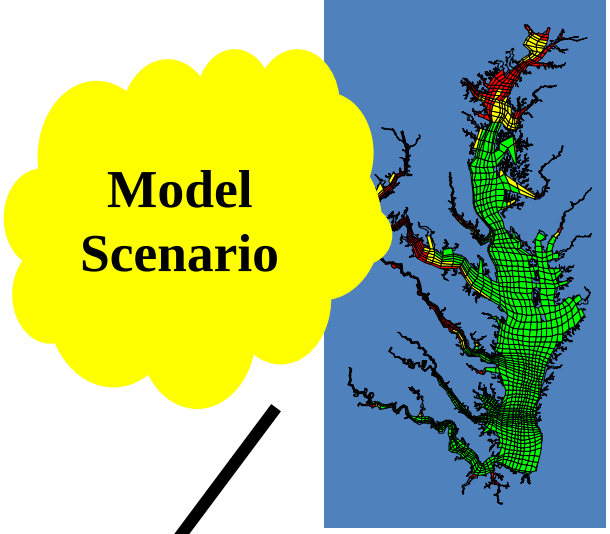




Change Analysis

1993-1995
Observed Data

1993-1995 scenario
"Observations"

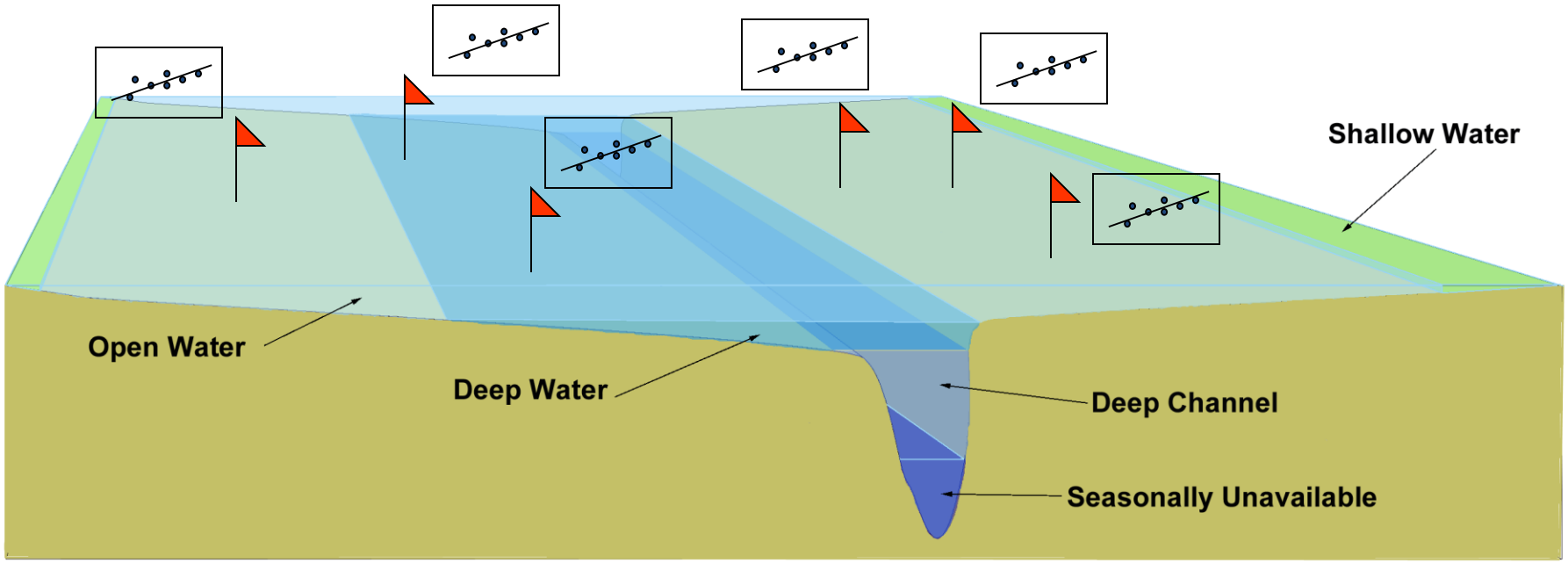
Criteria Assessment
Procedures

Criteria Assessment
Procedures

Criteria Achievement
in critical period

Criteria Achievement
Under Scenario

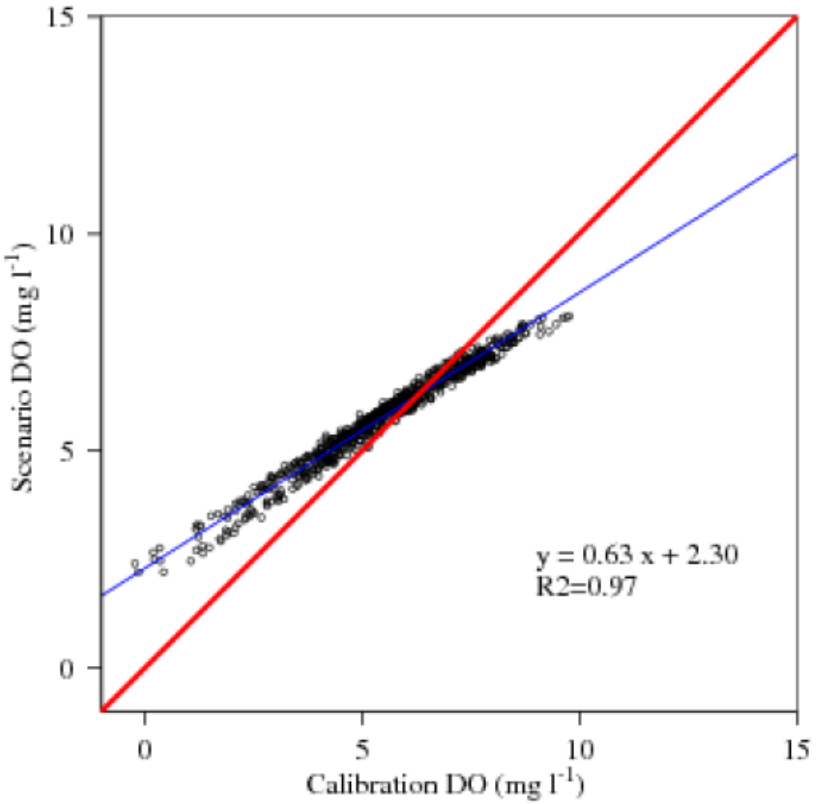
One regression for each point and each month



Regression methods for criteria assessment

Least Squares regression has been used for the TMDL, but climate change scenarios lack correlation with the calibration case

WIP2 vs Calibration



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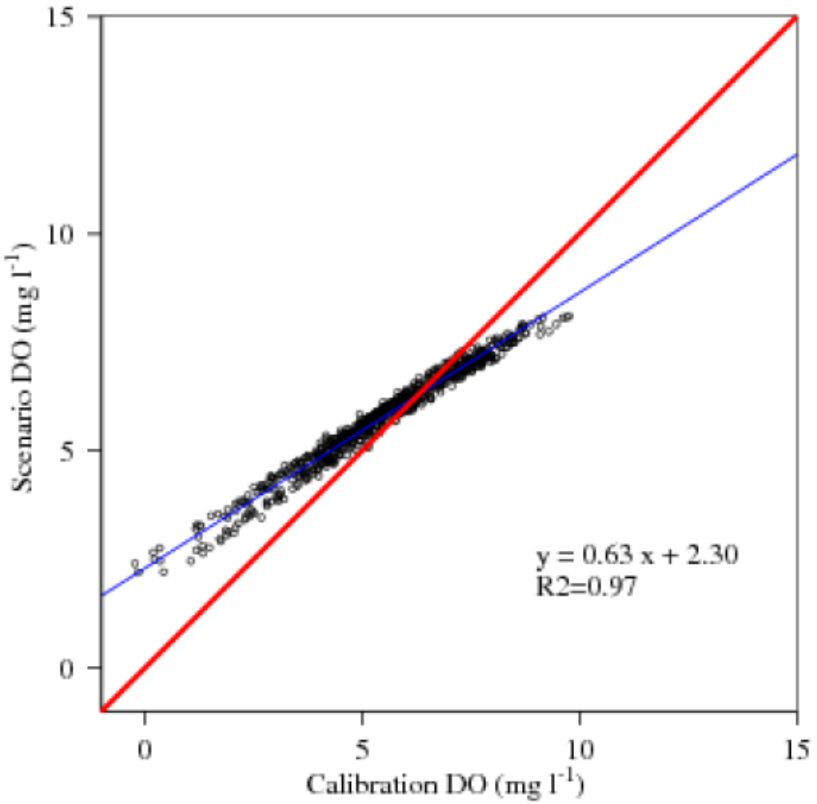
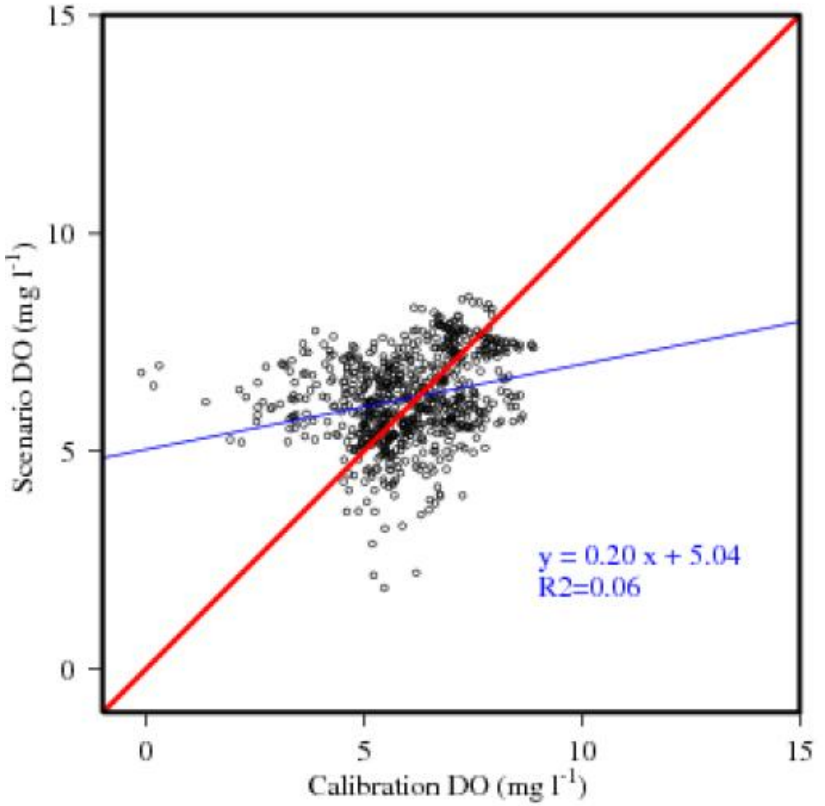
WIP2 vs Calibration

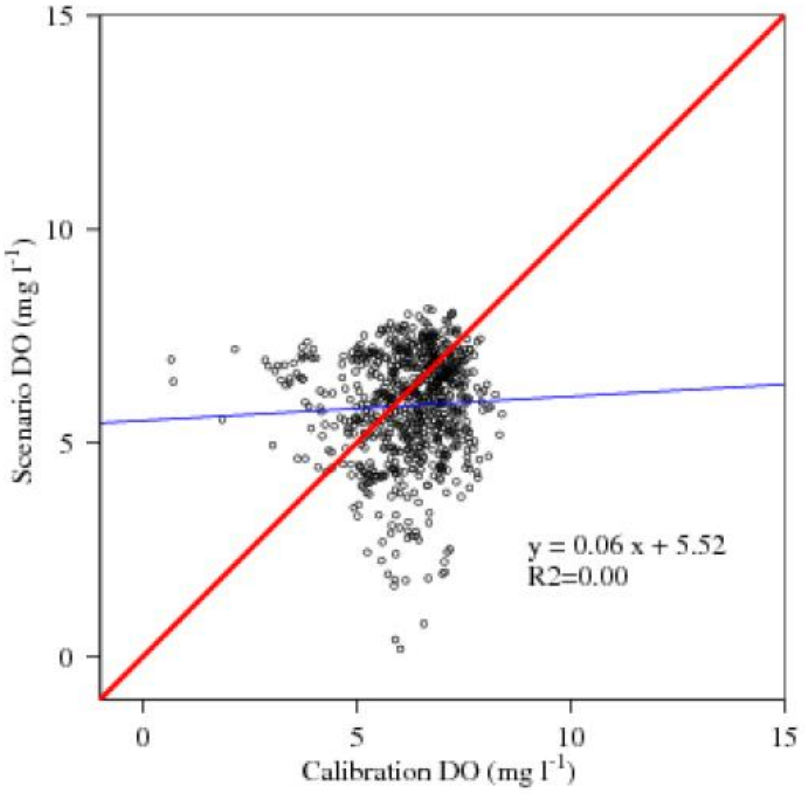


Climate WIP versus calibration

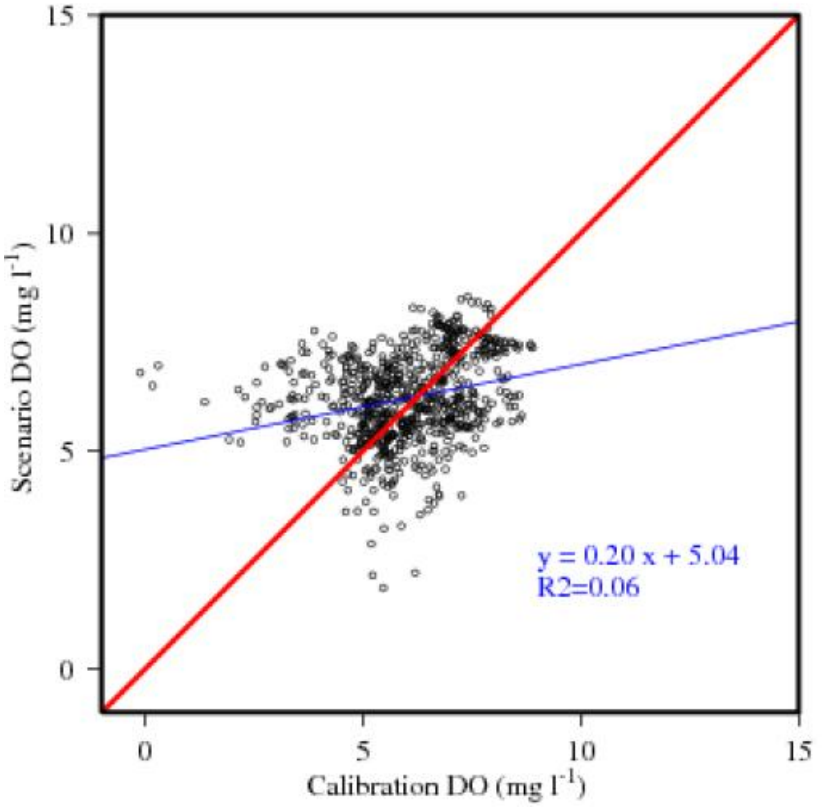


Climate WIP does not correlated with the base scenario, but does with climate base

Climate change vs Calibration



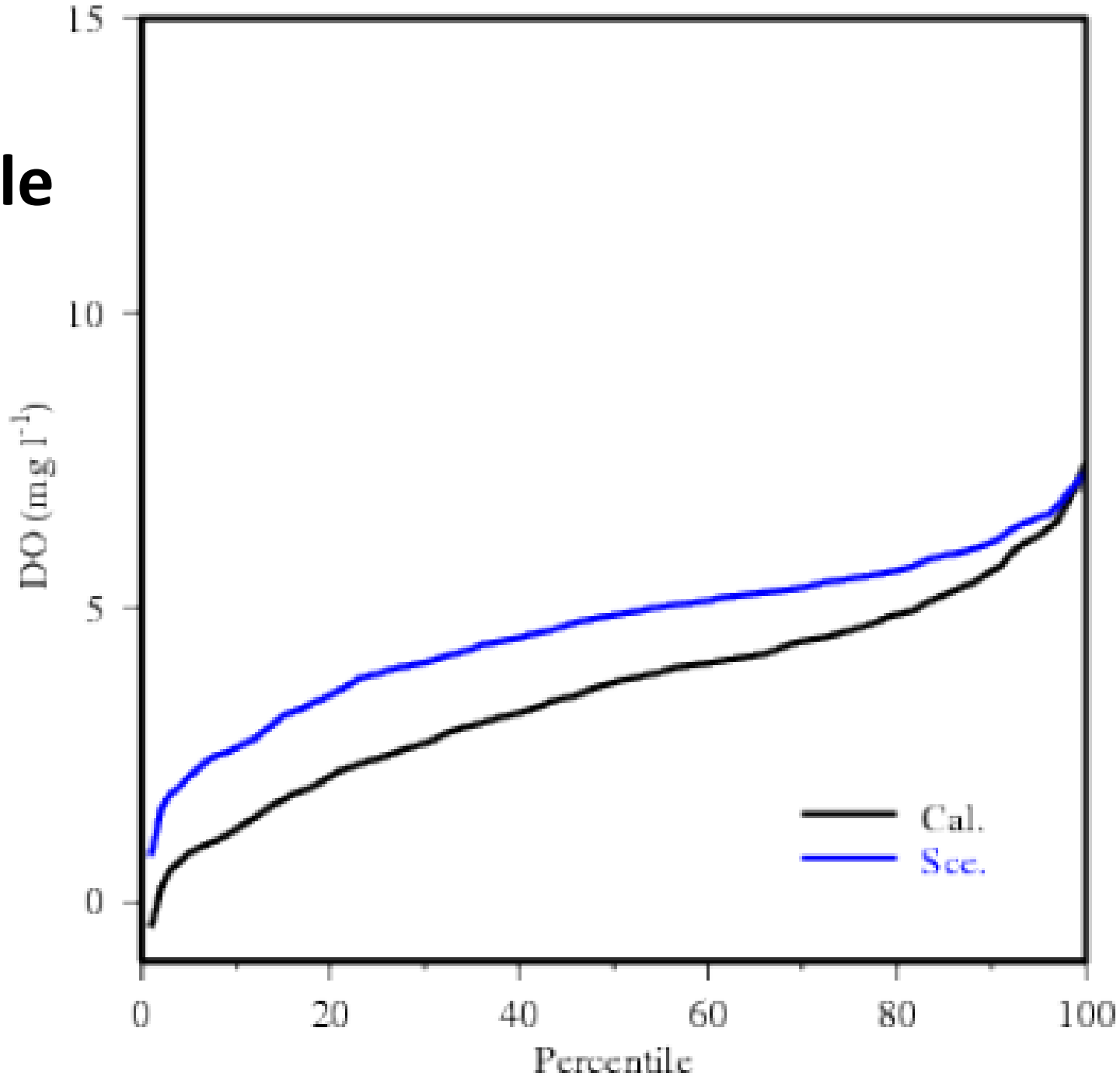
Climate WIP versus calibration



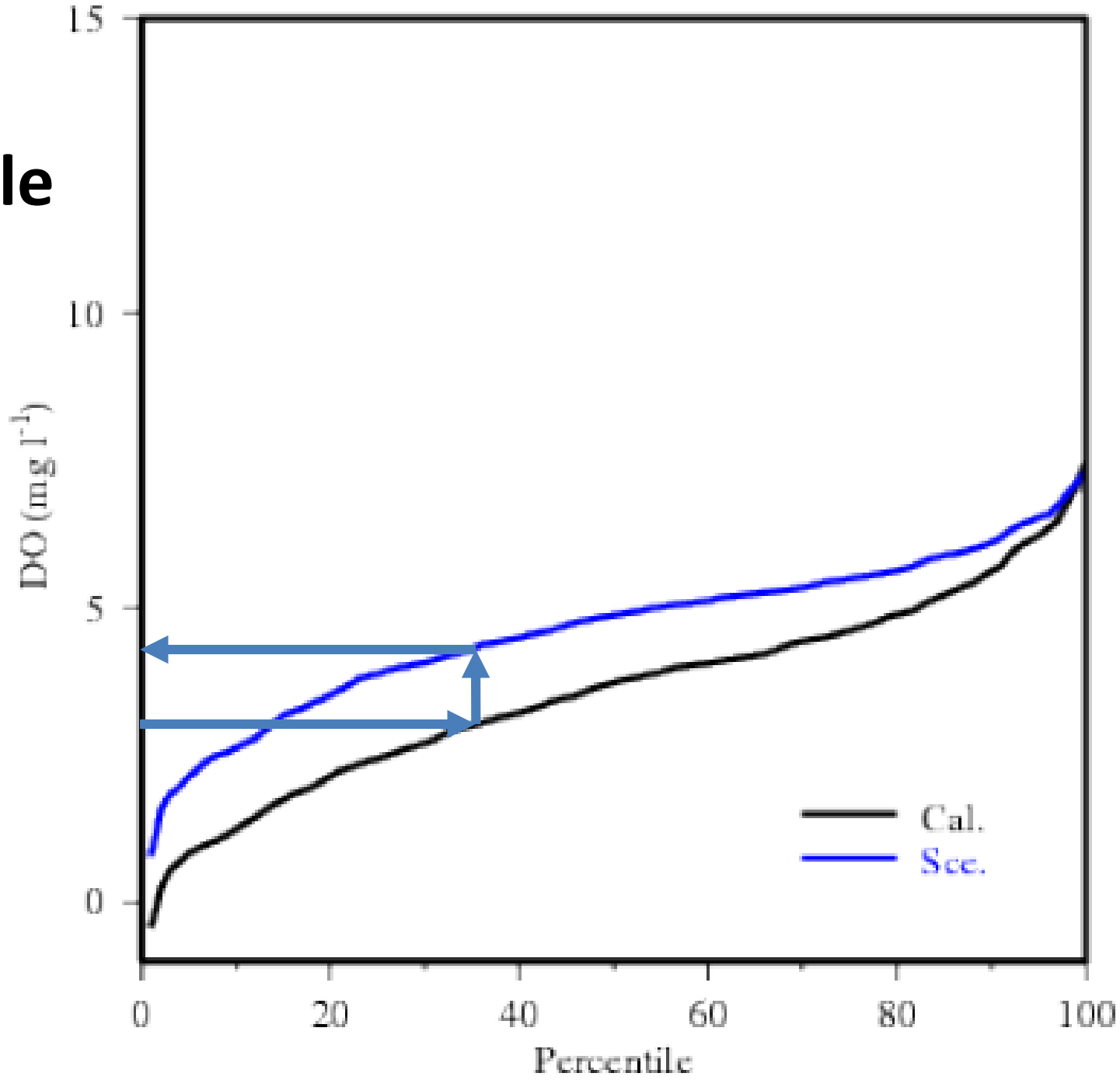
2025 Climate Change Scenario

Deep Channel	Observed	2025 climate with OLS
CB3MH	7.17%	0.01%
CB4MH	44.95%	27.25%
CB5MH	13.68%	0.52%
CHSMH	16.38%	33.67%
POTMH	15.55%	0.00%
POMMH	15.66%	0.00%
RPPMH	13.37%	2.77%
EASMH	18.03%	25.06%
MD5MH	20.72%	2.89%
VA5MH	4.06%	0.00%
PATMH	22.03%	0.00%

Percentile method

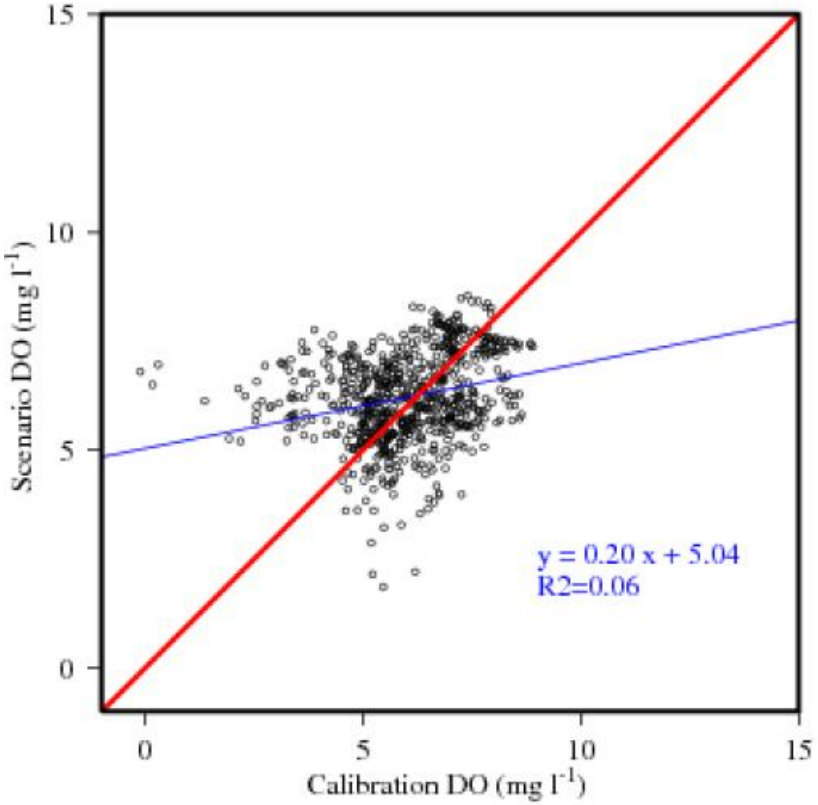


Percentile method

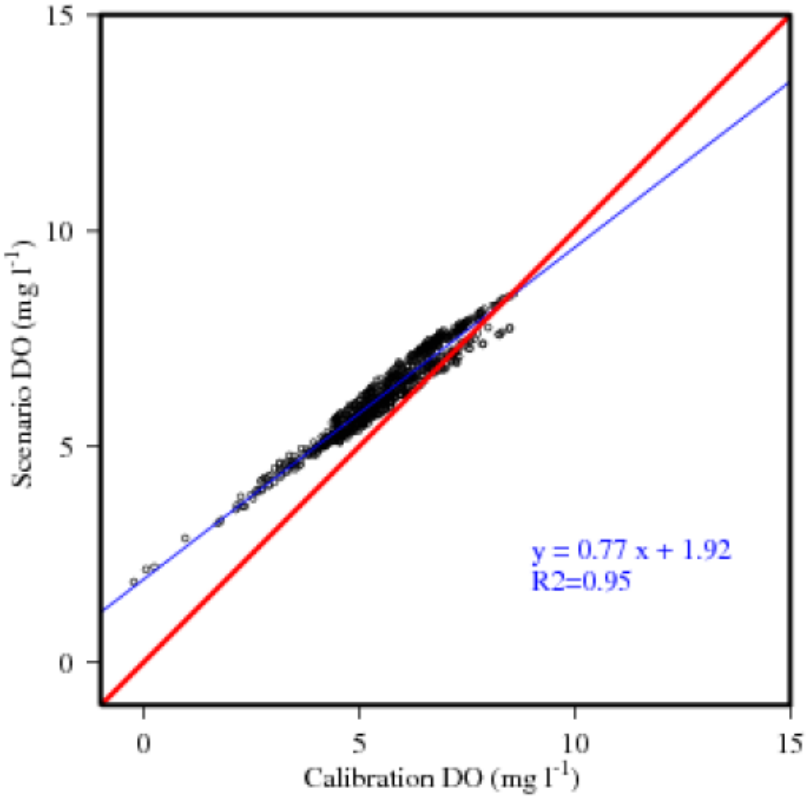


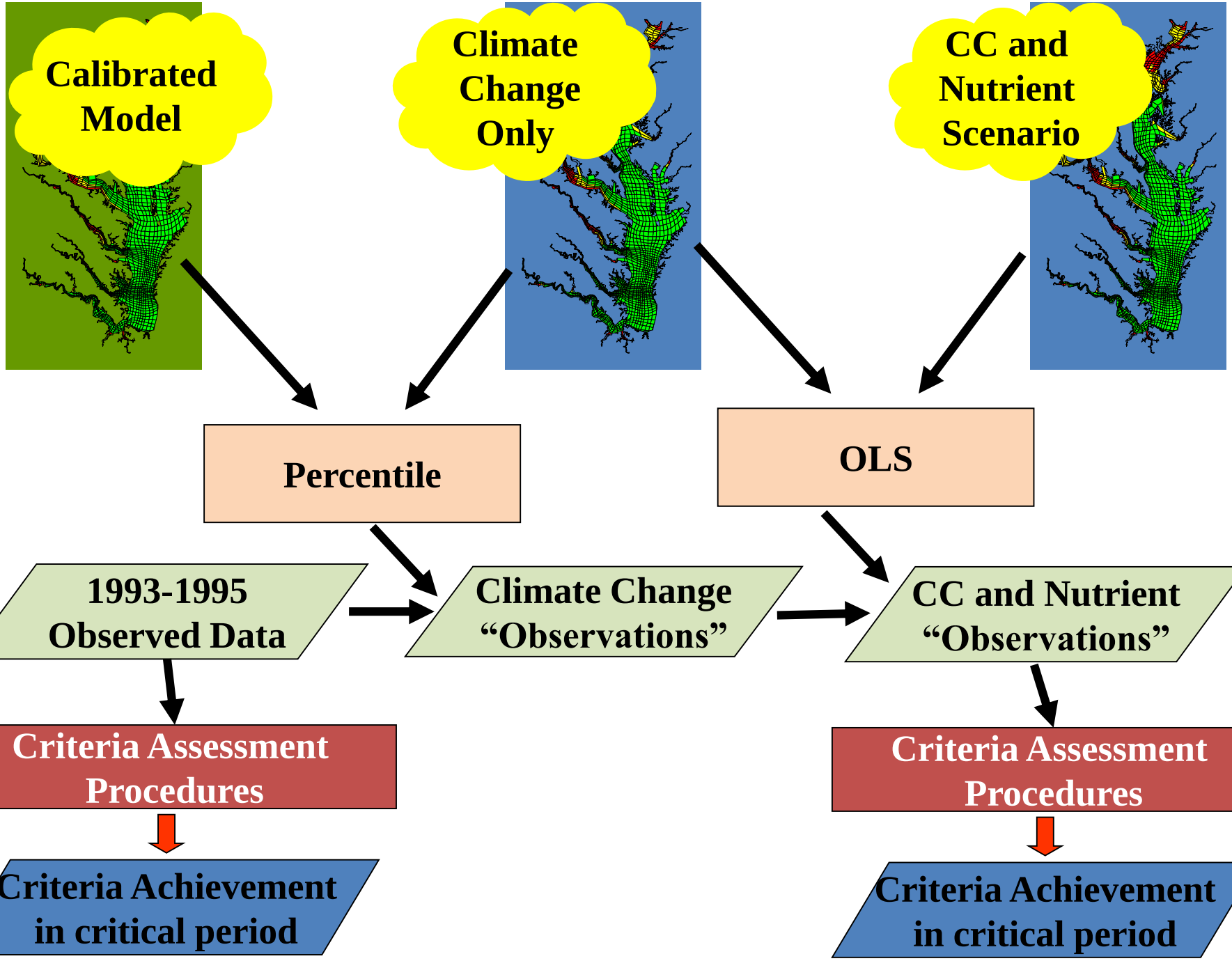
Climate WIP does not correlate with the base scenario, but does with climate base

Climate WIP versus calibration



Climate WIP versus climate base




Calibrated Model
Climate Change Only
CC and Nutrient Scenario
Percentile
OLS
1993-1995 Observed Data
Climate Change "Observations"
CC and Nutrient "Observations"
Criteria Assessment Procedures
Criteria Assessment Procedures
Criteria Achievement in critical period
Criteria Achievement in critical period

2025 Climate Change WIP Scenario assessed with both OLS and two steps

Deep water 1993-1995

	Beta4_TMDL OLS	CC2025WIP two_steps
CB3MH	0.05%	0.01%
CB4MH	5.18%	4.40%
CB5MH	0.30%	0.34%
CB6PH	0.00%	0.00%
CB7PH	0.00%	0.00%
CHSMH	0.00%	0.00%
EASMH	0.00%	0.00%
PAXMH	0.00%	0.00%
POTMH	0.00%	0.00%
POMMH	0.00%	0.00%
RPPMH	0.00%	0.00%
SBEMH	0.00%	0.00%
YRKPH	0.00%	0.00%
MD5MH	0.92%	1.17%
VA5MH	0.00%	0.00%
PATMH	0.01%	0.00%
MAGMH	7.30%	0.32%
SOUMH	2.67%	2.62%
SEVMH	0.00%	0.00%

Summary

- **Climate change scenarios are assessed with percentile method.**

- **Climate change management scenarios are assessed with two steps: Percentile method between the calibration and the climate base scenario, and OLS between climate based and climate WIP scenarios.**