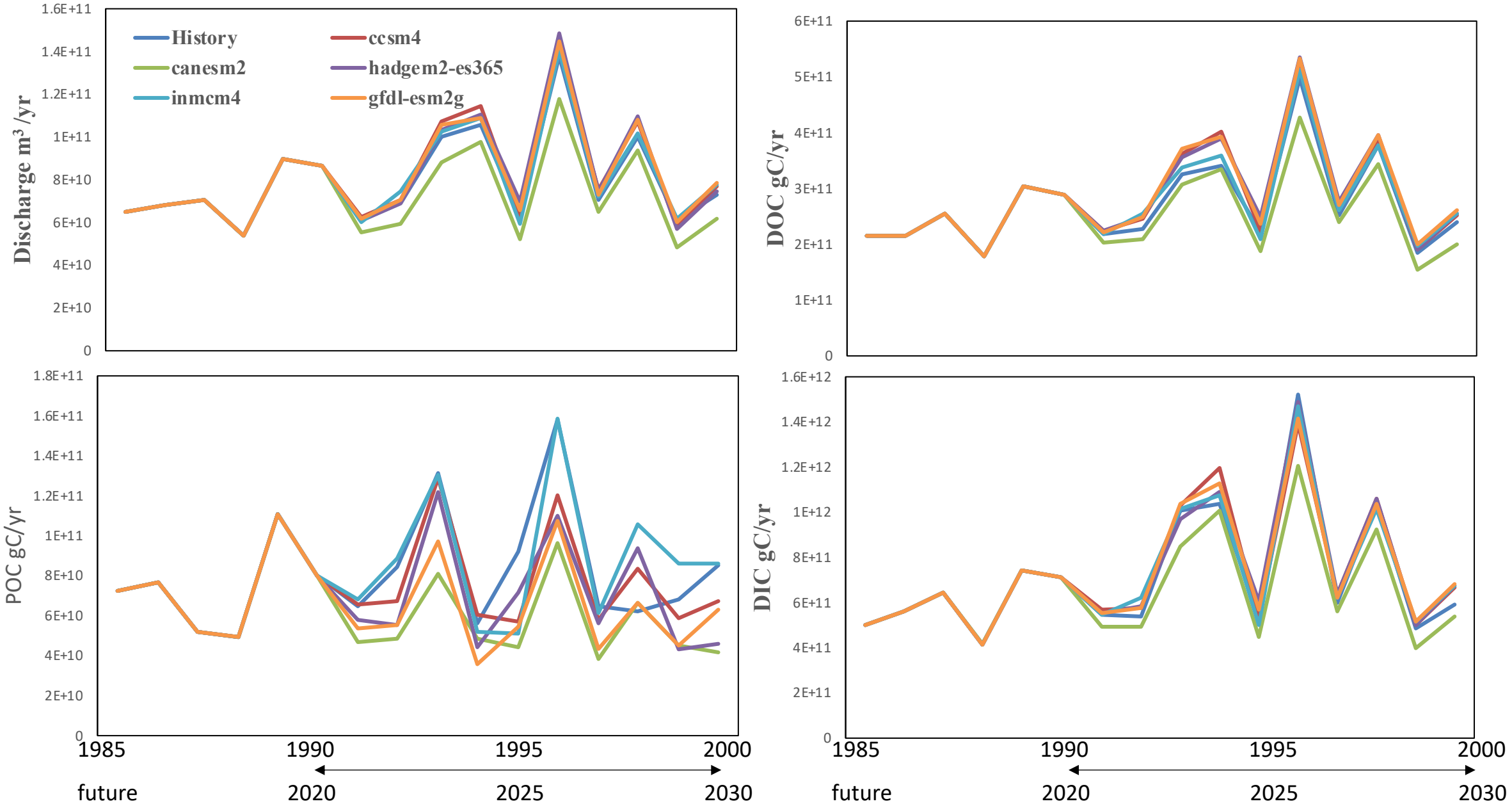
Updates on Riverine C, N Exports along Chesapeake Bay Watershed Simulated by DLEM

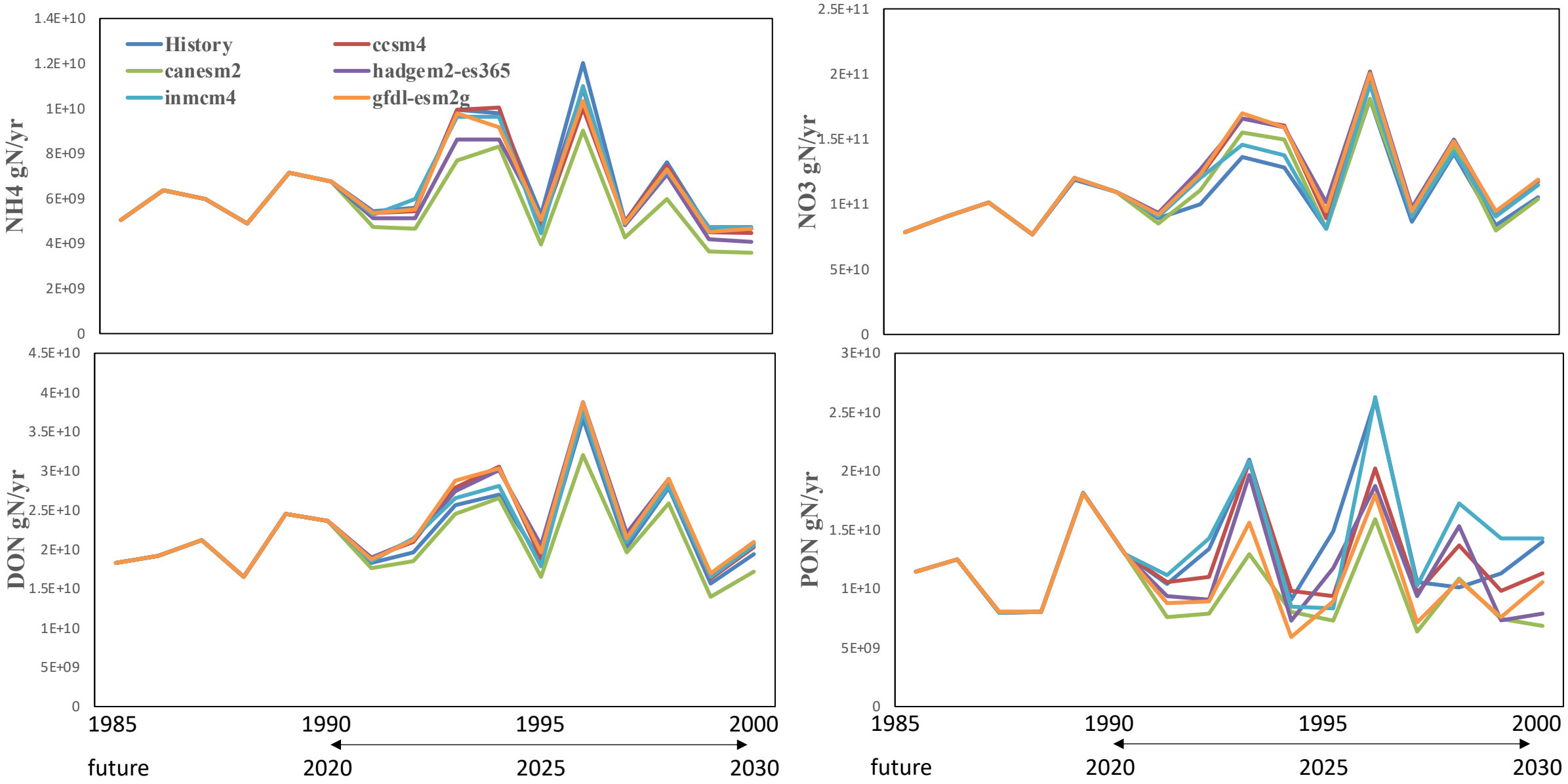
Yuanzhi Yao, Hanqin Tian, Zihao Bian, Susan Pan

Auburn University

Riverine discharge and C exports (2021-2030)



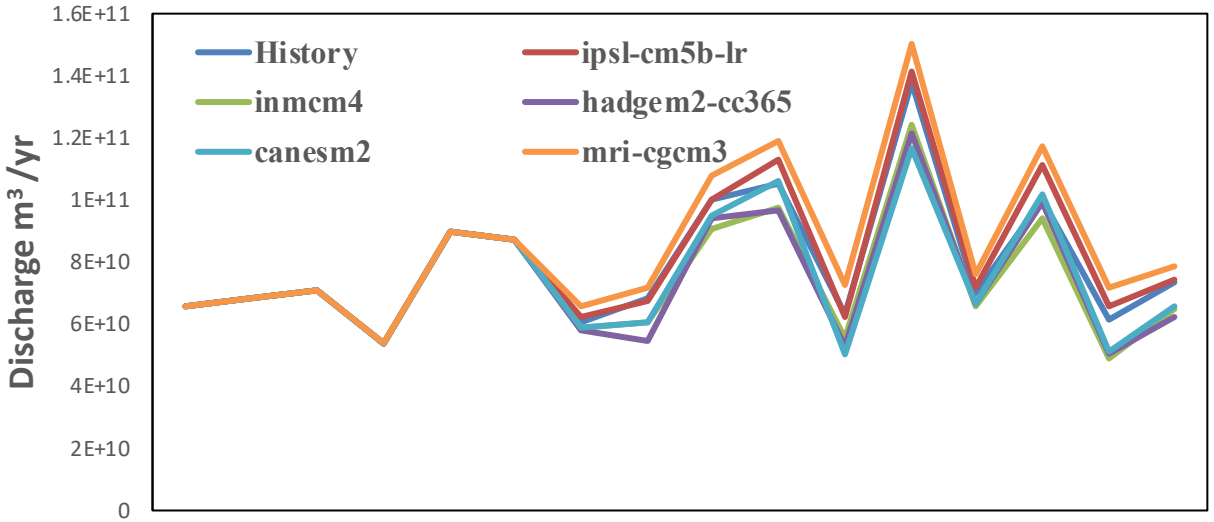
Riverine N exports (2021-2030)

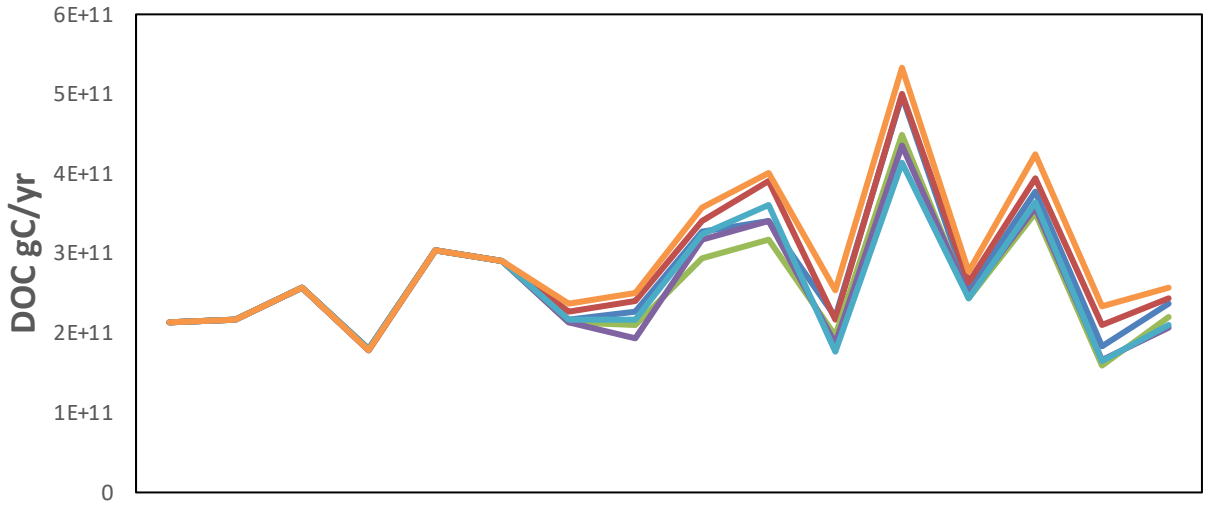


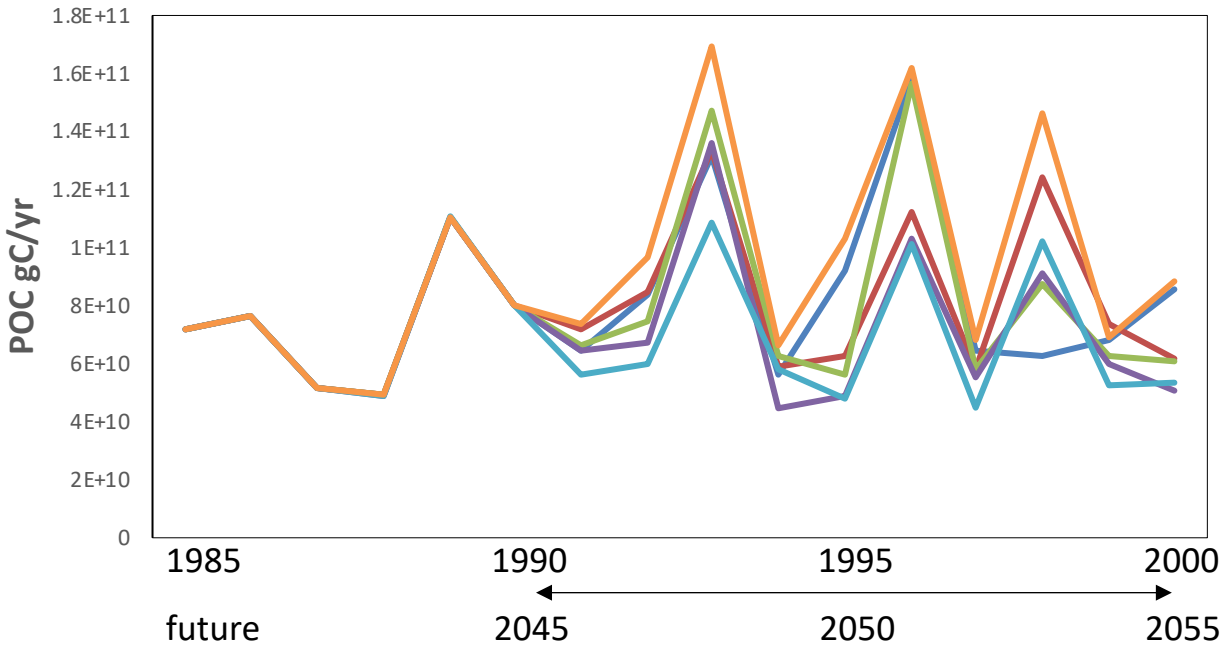
Change rates of the discharge, C and N of the 5 GCMs during 2021-2030 relative to historical period (1991-2000)

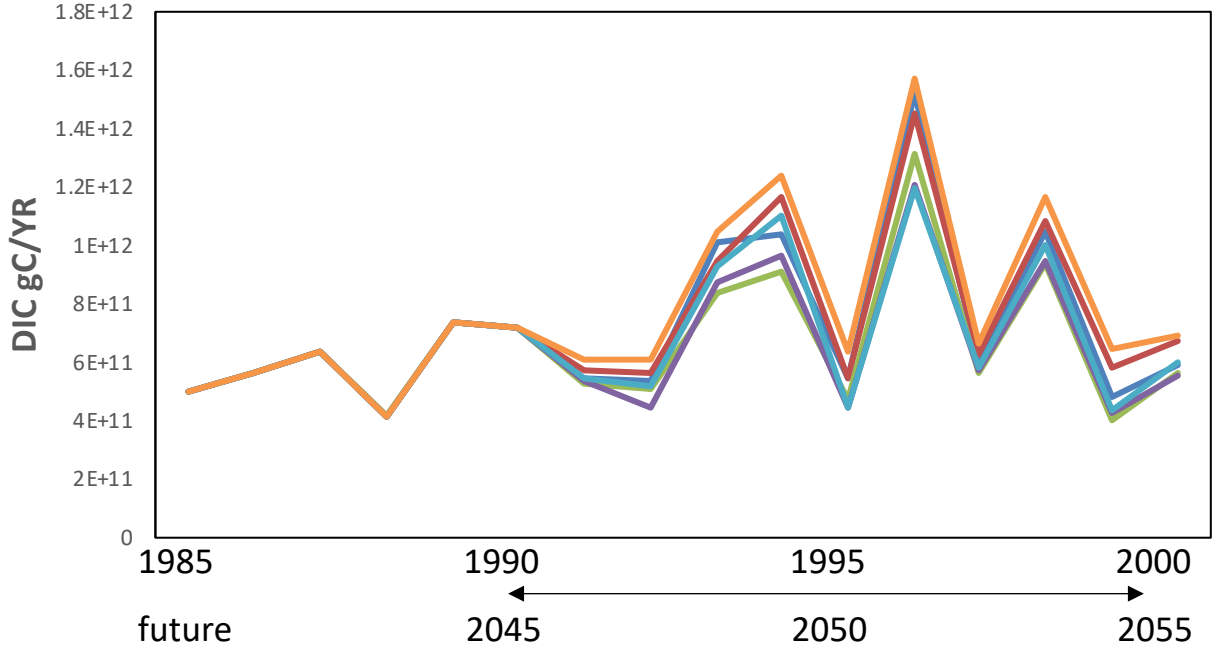
	ccsm4	canesm2	hadgem2-es365	inmcm4	gfdl-esm2g
Discharge	4.32%	-12.27%	4.29%	2.10%	4.14%
DOC	6.94%	-9.45%	8.28%	3.56%	8.74%
POC	-11.50%	-35.70%	-19.22%	2.45%	-28.15%
DIC	3.03%	-12.50%	3.28%	1.79%	2.75%
NH4	-4.35%	-20.16%	-9.21%	-3.49%	-4.96%
NO3	13.18%	4.62%	15.43%	6.55%	14.36%
DON	5.56%	-7.37%	7.04%	3.05%	7.15%
PON	-10.26%	-34.90%	-17.71%	3.33%	-27.33%

Riverine discharge and C exports (2045-2055)

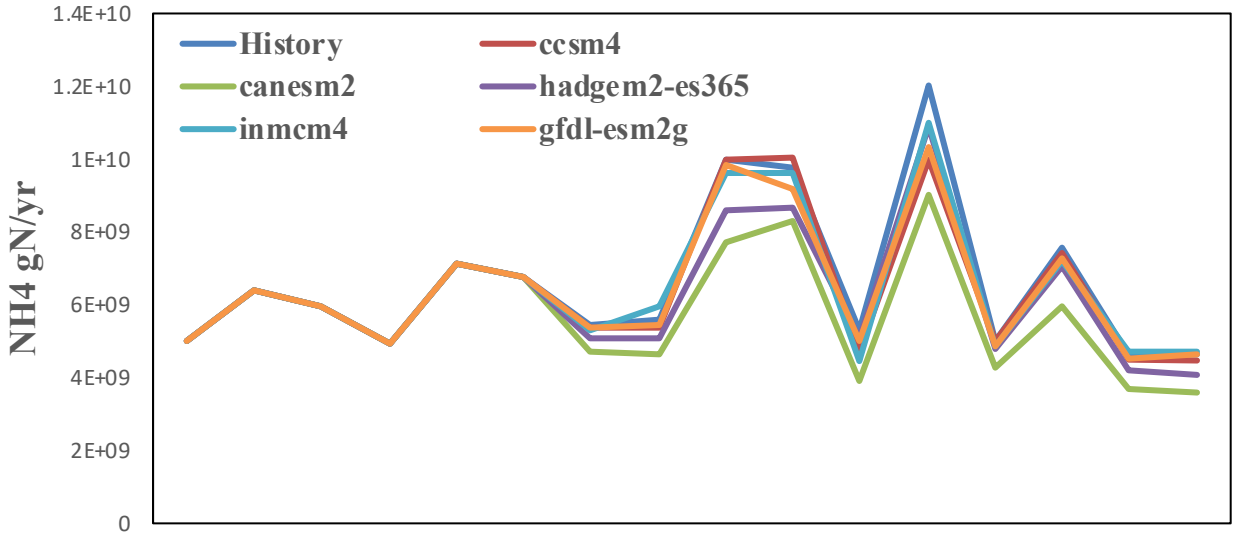


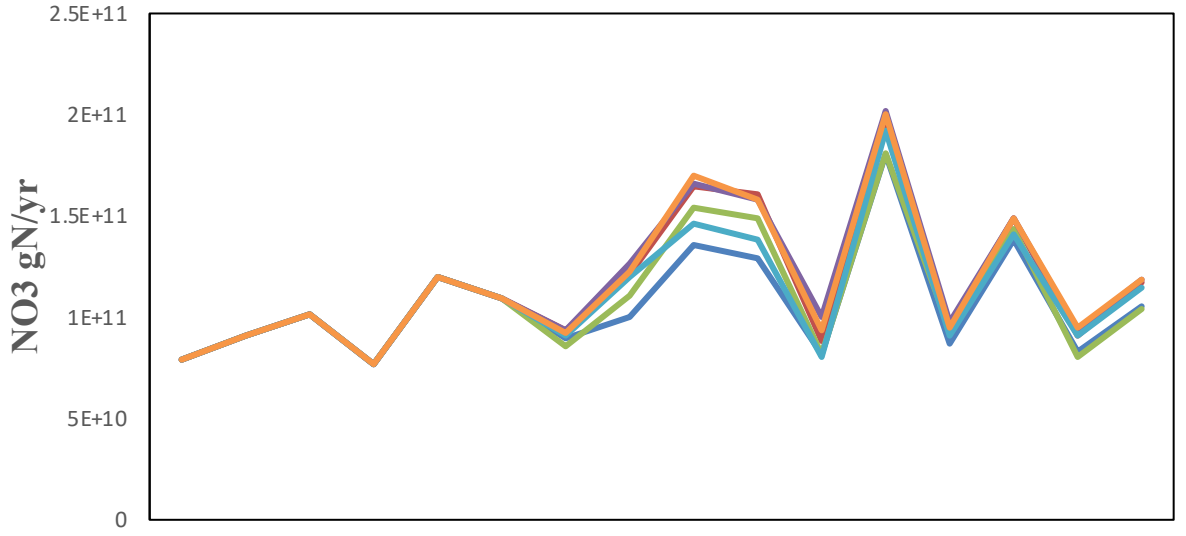


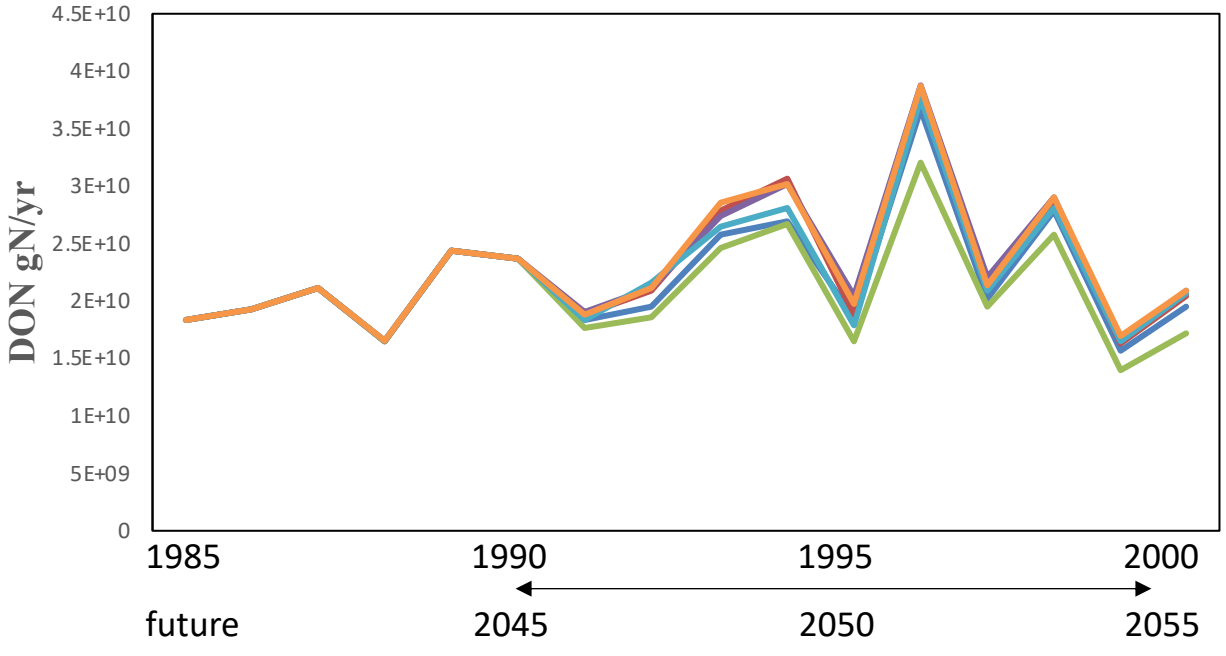


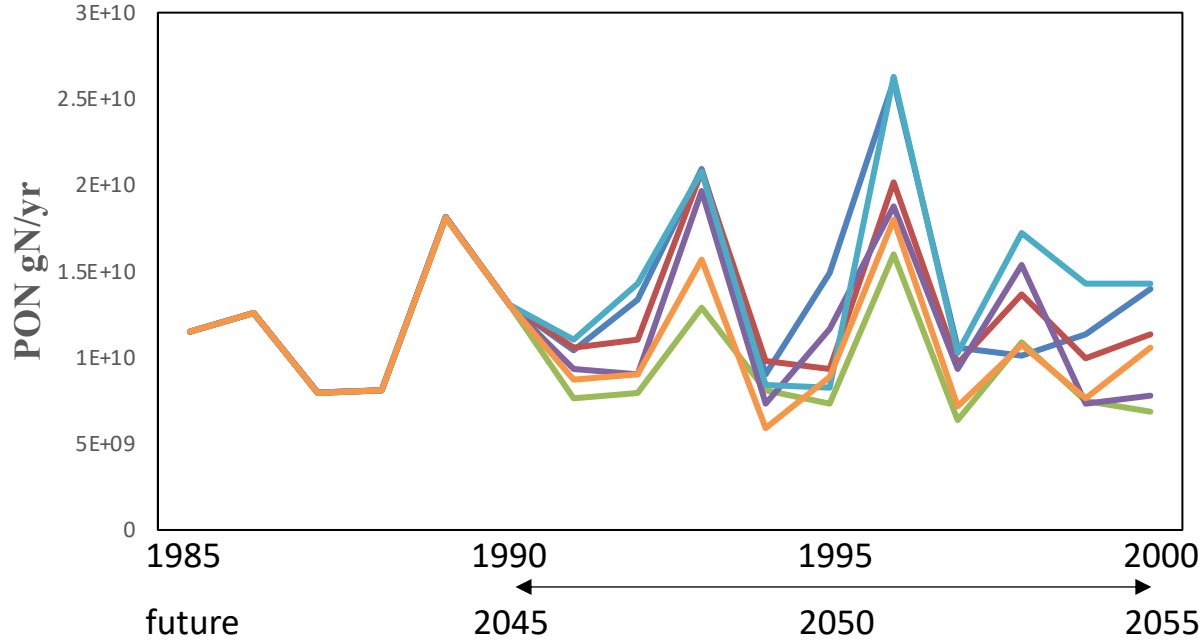


Riverine N exports (2045-2055)









Change rates of the discharge, C and N of the 5 GCMs during 2045-2055 compared with history

	ipsl-cm5b-lr	inmcm4	hadgem2-cc365	canesm2	mri-cgcm3
Discharge	3.29%	-9.66%	-10.17%	-8.20%	10.63%
DOC	5.06%	-7.90%	-7.46%	-6.41%	11.84%
POC	-3.07%	-4.02%	-16.78%	-20.93%	20.29%
DIC	3.77%	-10.91%	-11.87%	-6.99%	12.04%
NH4	-4.70%	-16.36%	-19.58%	-16.07%	10.17%
NO3	16.85%	0.57%	12.01%	11.46%	14.37%
DON	4.17%	-5.99%	-6.12%	-4.98%	9.21%
PON	-1.76%	-3.14%	-15.92%	-19.72%	21.22%