

Range expansion of the invasive lionfish in the Northwest Atlantic with climate change

Brian D. Grieve*, Enrique N. Curchitser, Ryan R. Rykaczewski

*Corresponding author: bgrieve@email.sc.edu

Marine Ecology Progress Series 546: 225–237 (2016)

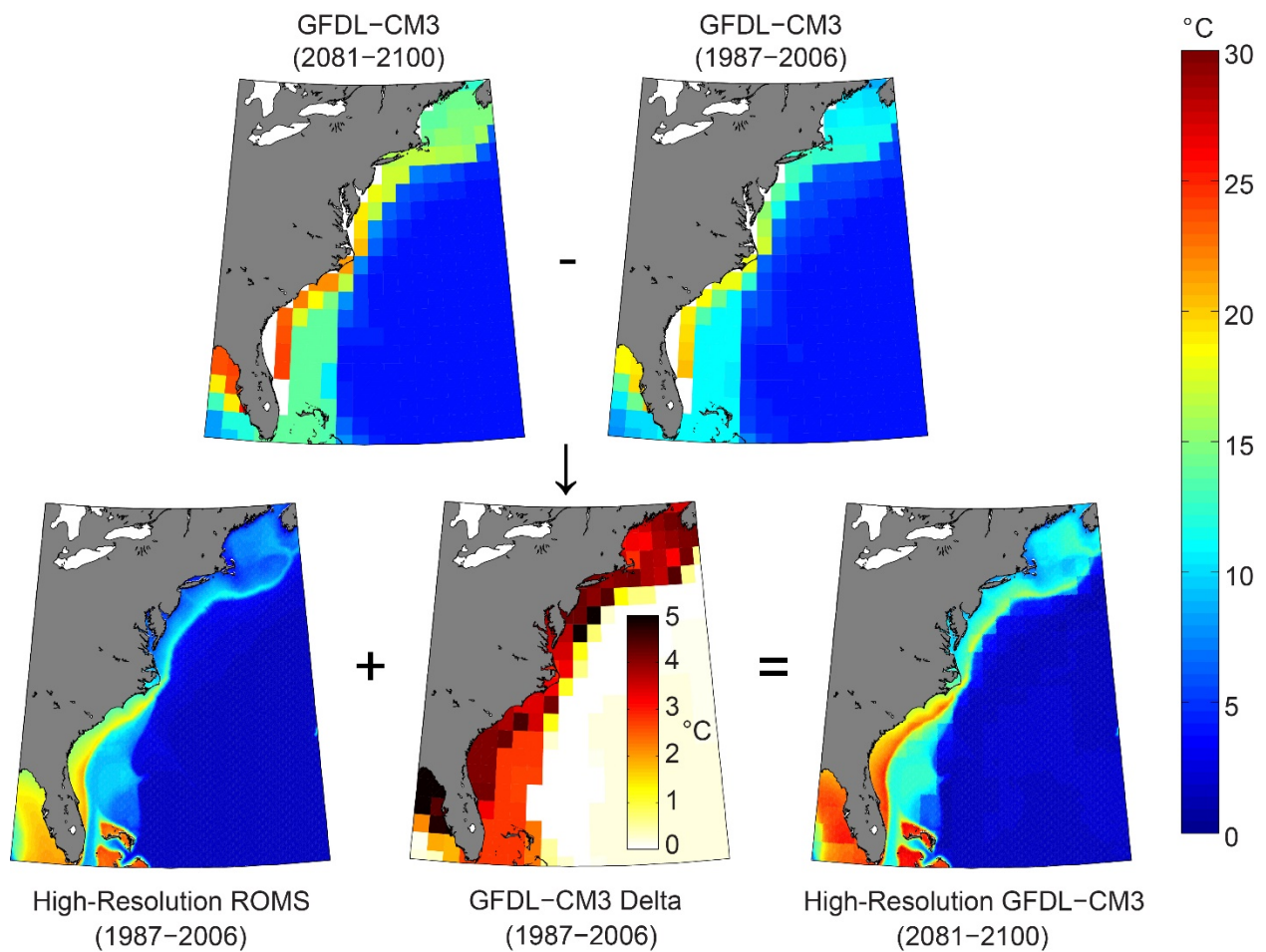


Figure S1: Demonstration of our application of the delta method for one model, NOAA-GFDL-CM3. In the top panels, the mean BT from the present-day period (1987-2006) is subtracted from the mean BT from the future period (2081-2100). This long-term difference is then interpolated using nearest-neighbor **and inverse-distance** methods. In the lower panels, these interpolated, long-term BT differences are added to the high-resolution (7-by-7 km) ROMS simulation of present-day BTs, yielding a high-resolution (i.e., downscaled) estimate of BTs during the future period

Table S1: Climate models used in this analysis

Institution	Model Abbreviation	Experiment	Average Oceanic Horizontal Resolution
Beijing Climate Center	BCC-CSM1-1	RCP 8.5 RCP 4.5	$0.8^{\circ} \times 1.0^{\circ}$
Beijing Normal University GCESS	BNU-ESM	RCP 8.5	$0.9^{\circ} \times 1.0^{\circ}$
Canadian Centre for Climate Modelling and Analysis	CanESM 2	RCP 8.5 RCP 4.5	$0.9^{\circ} \times 1.4^{\circ}$
Centro Euro-Mediterraneo per I Cambiamenti Climatici	CMCC_CESM	RCP 8.5	$1.2^{\circ} \times 2.0^{\circ}$
	CMCC_CMS	RCP 8.5 RCP 4.5	$1.2^{\circ} \times 2.0^{\circ}$
Centre National de Recherches Meteorologiques	CNRM-CM5	RCP 8.5 RCP 4.5	$0.6^{\circ} \times 1.0^{\circ}$
Institute for Numerical Mathematics	INM_inmcm4	RCP 8.5 RCP 4.5	$0.5^{\circ} \times 1.0^{\circ}$
Institut Pierre Simon Laplace	IPSL-CM5A-MR	RCP 8.5 RCP 4.5	$1.2^{\circ} \times 2.0^{\circ}$
	IPSL-CM5B-LR	RCP 8.5 RCP 4.5	$1.2^{\circ} \times 2.0^{\circ}$
Institute of Atmospheric Physics	LASG-CESM_FGOALS-g2	RCP 8.5 RCP 4.5	$0.9^{\circ} \times 1.0^{\circ}$
Japan Agency for Marine-Earth Science and Technology	MIROC5	RCP 8.5	$0.8^{\circ} \times 1.0^{\circ}$
	MIROC5-ESM	RCP 8.5	$0.9^{\circ} \times 1.4^{\circ}$
	MIROC5-ESM-CHEM	RCP 8.5	$0.9^{\circ} \times 1.4^{\circ}$
Max Planck Institute	MPI-ESM-LR	RCP 8.5 RCP 4.5	$0.8^{\circ} \times 1.4^{\circ}$
NOAA Geophysical Fluid Dynamics Laboratory	GFDL-CM3	RCP 8.5 RCP 4.5	$0.9^{\circ} \times 1.0^{\circ}$
	GFDL-ESM2G	RCP 8.5 RCP 4.5	$0.9^{\circ} \times 1.0^{\circ}$
	GFDL-ESM2M	RCP 8.5 RCP 4.5	$0.9^{\circ} \times 1.0^{\circ}$