

Table 8. The major parameters and input required to initialize and execute the full system class of models, with notations of the major structural features.

		Data description	Inputs Static (S) or Dynamic (D)	Spatially resolved (Y or N) [does not mean it is not done for different regions, but directly in the model]	units	Origin, source, or method for derivation of value	Variance incorporated (Y or N)	Timeframe for derivation of value
Model Class	Full System		Both, mainly dynamic	Y			Y	In NEUS, usually 40+ yrs (1964-2004 for calibration); with 10 year projections; extended runs planned
Model	Atlantis	space prohibits all from being listed here; see Link et al. in press for a much fuller description of these input and parameter details and Link et al. 2011 for a briefer synopsis;						
		There are 45 biological groups, 18 fleets, 30 spatial boxes, 5 depth layers, 12 hr time steps, 40 yrs of time series to tune to, and 50 yr model runs; all of which has been calibrated at 4 different levels				Survey data, Age data, Landings data, food habits data, Oceanographic Data, Climatological Data, Economic Data	Y	
		Most can be loosely classed into hydrodynamic variables, physical forcing variables, biotic state variables and vital rate estimates, fleet dynamics, market drivers, and management measures						

Table 8, continued. The major parameters and input required to initialize and execute the full system class of models, with notations of the major structural features.

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Required Inputs							
	>1000 with age structure & w/out spatio-temporal replication						
	>200 w/out age structure w/out spatio-temporal replication						
Required Parameters							
	>8000 w/out spatio-temporal replication						