

The supplement material provides technical details about the climate and hydrodynamic models employed in the multi-model chain illustrated in the paper “Assessment of climate change impacts in the North Adriatic coastal area. Part I: A multi-model chain for the definition of climate change hazard scenarios.”

**Table S1.** Summary of the technical features of the multi-model chain applied to develop climate change hazard scenarios in the North Adriatic coastal areas.

Climate change hazard	Name	Category	Domain	Spatial resolution	Hazard Metrics	Time Scenario
Climate scenarios	SINTEX G	Climate Model	Global	Atmospheric resolution 120 km Oceanic resolution 200 km	Air/sea temperature	2070-2100
					Atmospheric pressure	
					Cloudiness	
	CMCC-MED	Climate Model	Global	Atmospheric resolution 80 km Oceanic resolution 200 km	Rainfall	
					Relative humidity	
					Salinity	
	EBU-POM	Climate Model	Mediterranean sea	28 km	Winds	2070-2100
					Air/sea temperature	
COSMO-CLM	Climate Model	Mediterranean sea	14 km	Atmospheric pressure		
				Cloudiness		
				Rainfall		
				Relative humidity		
				Salinity		
Sea level rise scenarios	SHYFEM	Ocean and sea Circulation model	North Adriatic sea	2.5 km-50 metres	Winds	2070-2100
					Water levels	
Coastal erosion scenarios	SWAN	Wave model	Adriatic sea	From 5 to 2 km	Current velocity	2070-2100
					Wave energy	
					Wave direction	
					Wave height	
	ROMS	Ocean circulation model	Adriatic sea	From 5 to 2 km	Wave period	2070-2100
					Bottom stress	
					Salinity	
					Sea temperature	
					3D currents	

**Figure S1.** Hazard Maps representing the Adriatic sea-level rise (SLR) for the year 2100. Sea-level changes are simulated by the SHYFEM model according to a SLR at Otranto of 20 cm (low scenario, a); and of 45 cm (b, high scenario).

