Models from PE used in the SEPRISE demonstration

Institution	Puertos del Estado (PE)
Model Name	HAMSOM
Characteristics	3D baroclinic model. Finite differences. Arakawa-C. Semi-implicit. Hamsom is used inside Nivmar (Puertos del Estado storm surge forecasting system) vertically integrated and in barotopic mode.
Area Covered	Sea Area: East Atlantic and Med Sea.
Variables Predicted	Sea level
Operational / Pre-operational	Operational
Source of Atmospheric Forcing	HIRLAM model output produced by the Spanish Meteorological Institute.
Length of Forecast	72 hours
How many forecast cycles per day, i.e. how often is the model run?	2 cycles per day

Additional Information		
Numerical basis of the model	Model Area	Lon34°W - Lat 48°N Lon 35°E - Lat20°N
	Number of grid points in X-Y axis	154 x 248
	Number of vertical levels	1
Resolution (° or km)	16	
Computer used	24 processors Silicon graphics 3700	
Validation method	Real time validation with tide gauges.	

Use of model	x	Research	x	Public
	x	Governmental		Commercial
		Private		

Institution	Puertos del Estado (PE)
Model Name	WAM
Characteristics	Wave generation and propagation. Finite difference grid. Two way nesting scheme.
Area Covered	Sea Area: North Atlantic Ocean and Mediterranean Sea.
Variables Predicted	Wave spectrum and integrated parameters.
Operational / Pre-operational	Operational
Source of Atmospheric Forcing	HIRLAM model from the Spanish Meteorological Institute.
Length of Forecast	72 hours.
How many forecast cycles per day, i.e. how often is the model run?	2 cycles per day (every 12 hours).

Additional Information				
Numerical basis of the model	Model Area North Atlantic Mediterranean		Lon 59W-8E Lat 20-67N Lon 7W-15E Lat 35-45N	
	Number of grid points in X-Y axis			
	Number of vertical levels			
Resolution (° or km)	From 1ºx1º to 2.5' x 2.5'			
Computer used	Silicon graphics 3700.			
Validation method	Data from Puertos del Estado buoys networks.			
Use of model	✓	Research	✓	Public
	✓	Governmental		Commercial
		Private		

Institution	Puertos del Estado (PE)
Model Name	POLCOMS
Characteristics	Baroclinic 3-D model suitable for the modelling of baroclinic processes on the shelf, at the shelf-slope and in ocean regions.
Area Covered	Sea Area: North Eastern side of the Atlantic Ocean.
Variables Predicted	3D currents, temperature and salinity fields. Surface elevation.
Operational / Pre-operational	Operational
Source of Atmospheric Forcing	Operational forecast system based on HIRLAM model from the Spanish Meteorological Institute.
Length of Forecast	72 hours.
How many forecast cycles per day, i.e. how often is the model run?	1 cycle per day.

Additional Information				
Numerical basis of the model	Model Area	Lon 15W – 0.50W Lat 32N – 48N		
	Number of grid points in X-Y axis	291x321		
	Number of vertical levels	34 s-level		
Resolution (° or km)	1/20 º = 0.050º (~4-5 Km)			
Computer used	Silicon graphics 3700.			
Validation method	Comparison with in-situ data from PE buoys network			
Use of model	✓	Research	✓	Public
	✓	Governmental		Commercial
		Private		

Institution	Puertos del Estado (PE)
Model Name	DIECAST
Characteristics	Primitive equations Hydrostatic Rigid lid Z-vertical coordinate Bottom and coastal friction Mixed-layer physics
Area Covered	Sea Area: Western Mediterranean Basin
Variables Predicted	Temperature, salinity, currents
Operational / Pre-operational	Operational
Source of Atmospheric Forcing	HIRLAM 0.16 (daily provided by the Spanish Met Office, INM)
Length of Forecast	72h
How many forecast cycles per day, i.e. how often is the model run?	Once per day

Additional information				
Numerical basis of the model	Model Area	Lon 5ºW Lat 35ºN Lon 9ºE Lat 44.5ºN		
	Number of grid points in X-Y axis	291-191		
	Number of vertical levels	30		
Resolution (° or km)	0.05ºx0.05º			
Computer used	SGI Altix 3000			
Validation method	Comparison wit in-situ and satellite measurements			
Use of model		Research	X	Public
		Governmental		Commercial
		Private		