

Maritime Weather in the Here and Now

In our common language,

climate change, impacts, extremes, high rain fall rates, ice melt, more intense storms, heat, drought, floods, persistence, inundation, rapid intensification, resilience, adaptation, mitigation, vulnerability, terminology

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Maritime Weather in the Here and Now

Requirement of timely and accurate information:

Warnings, forecasts, observations, timely, communication, decision making, safety

The Forecast Process

Input

Output

Observations

***Coupled**
Numerical Models
Deterministic
Probabilistic

Guidance Products
Post-processed



Verification

Warnings &
Forecasts

Graphical

Gridded

Text Bulletins

(Days 1-10)

Mariner

Add value
Filter

Experience / familiarity/
Interpretation





Maritime Weather in the Here and Now



Observations: input to a) weather centers
b) mariners



Information services: Observations, Warnings,
forecasts



METAREAs

SOLAS Ch. V, Safety of Navigation, Reg. 4, (b) “To warn ships of gales, storms and tropical storms...”

IMO Maritime Safety Information (MSI) Resolution A.705, 706, and 1051

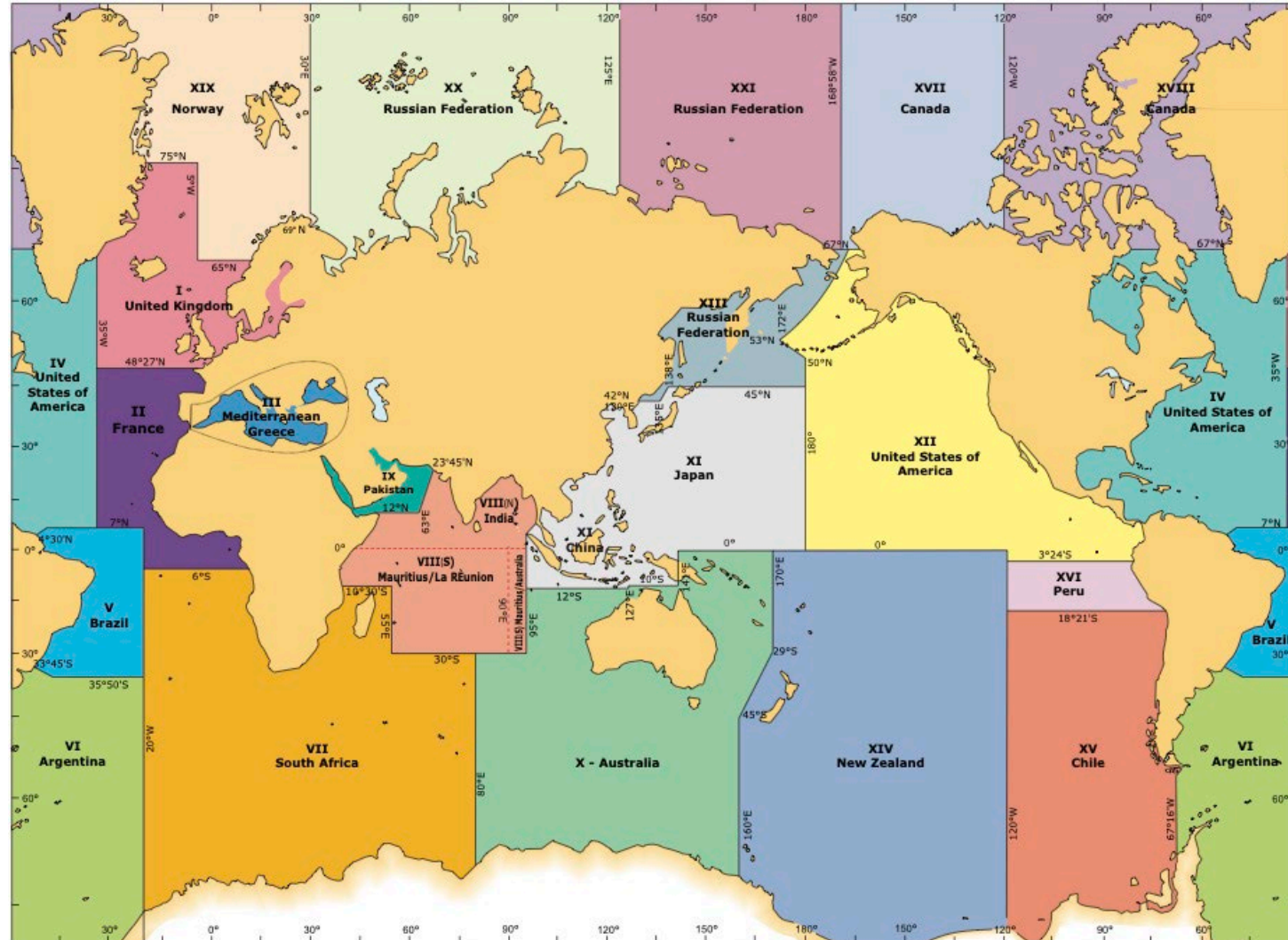
WMO Pub. 558 – Manual on Marine Meteorological Services



IMO
SOLAS



WORLD
METEOROLOGICAL
ORGANIZATION





Maritime Weather in the Here and Now



Information services: Observations, Warnings, forecasts



S-100 International Hydrographic Organization
Overlays for Electronic Charting Systems



Jan 1 2026 – optional to use (IMO)



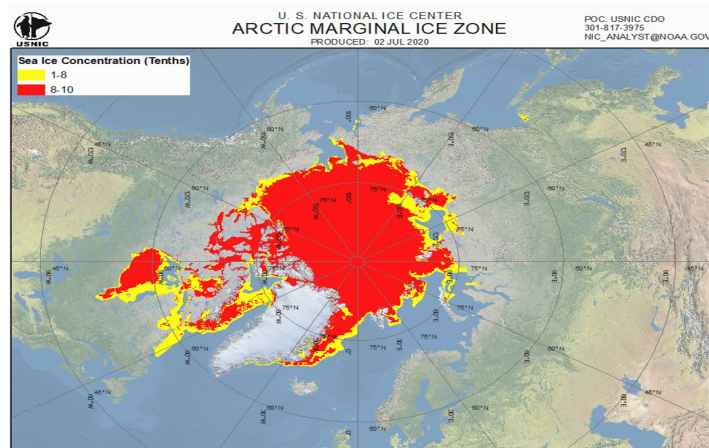
Jan 1 2029 – required for ECDIS manufacture

S-41X Wave & Weather Overlays

S - 411

Ice Hazards
and
Information

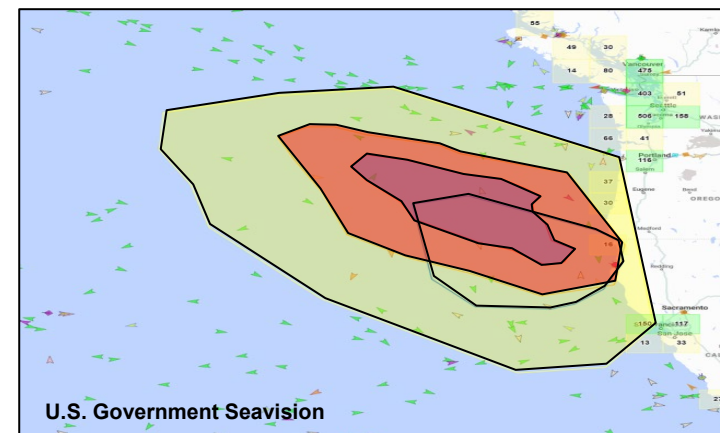
Portrayal
Pending



S - 412

Weather and
Wave
Warnings

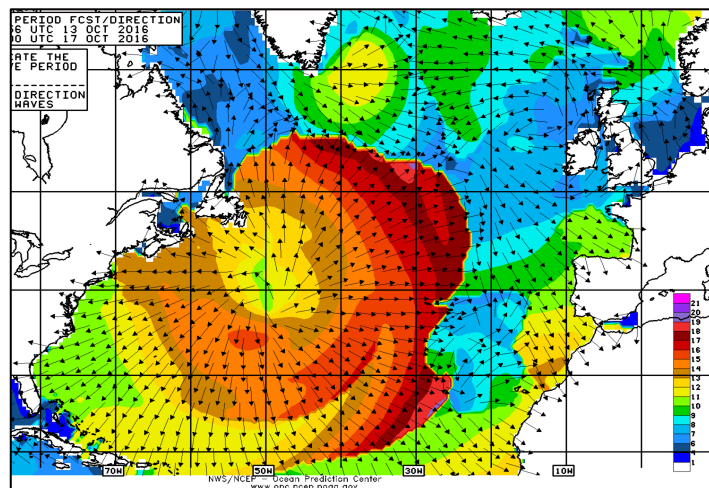
Polygons



S - 413

Weather and
Wave
Conditions

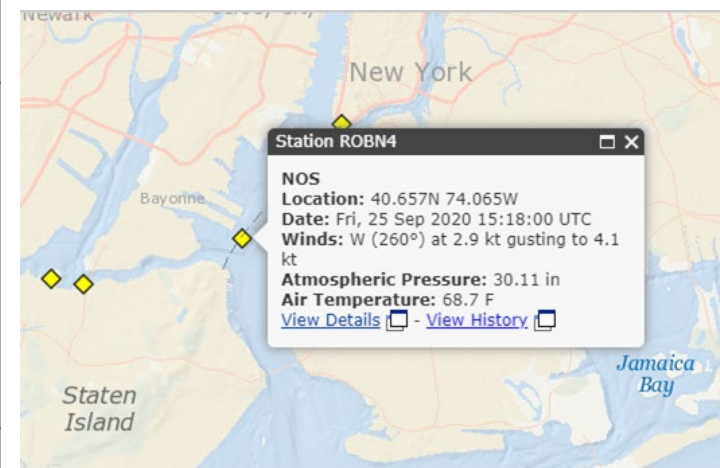
Graphics &
Gridded
Data



S - 414

Weather and
Wave
Observation
s

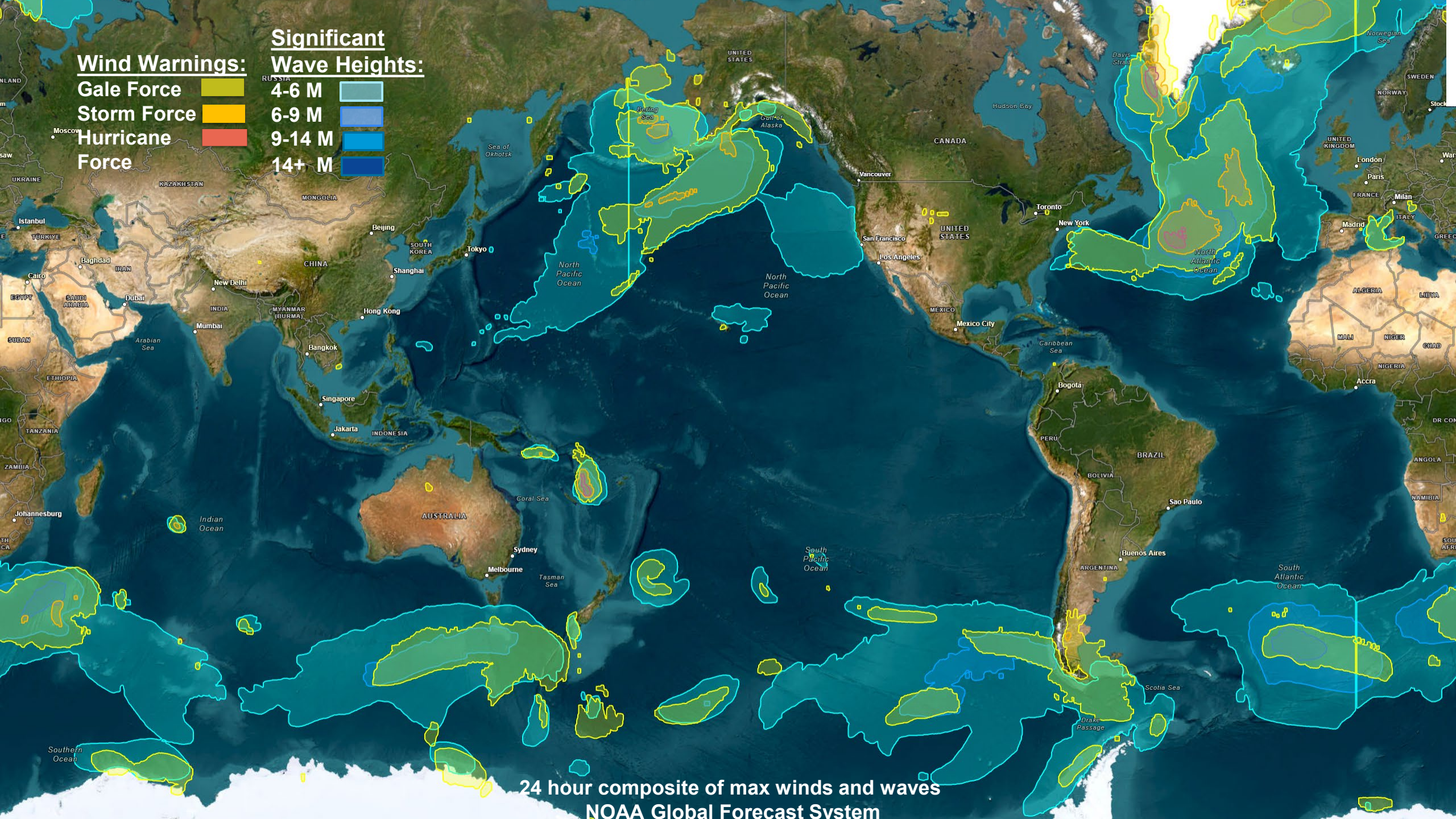
Point Based
Data



Wind Warnings:
Gale Force
Storm Force
Hurricane Force



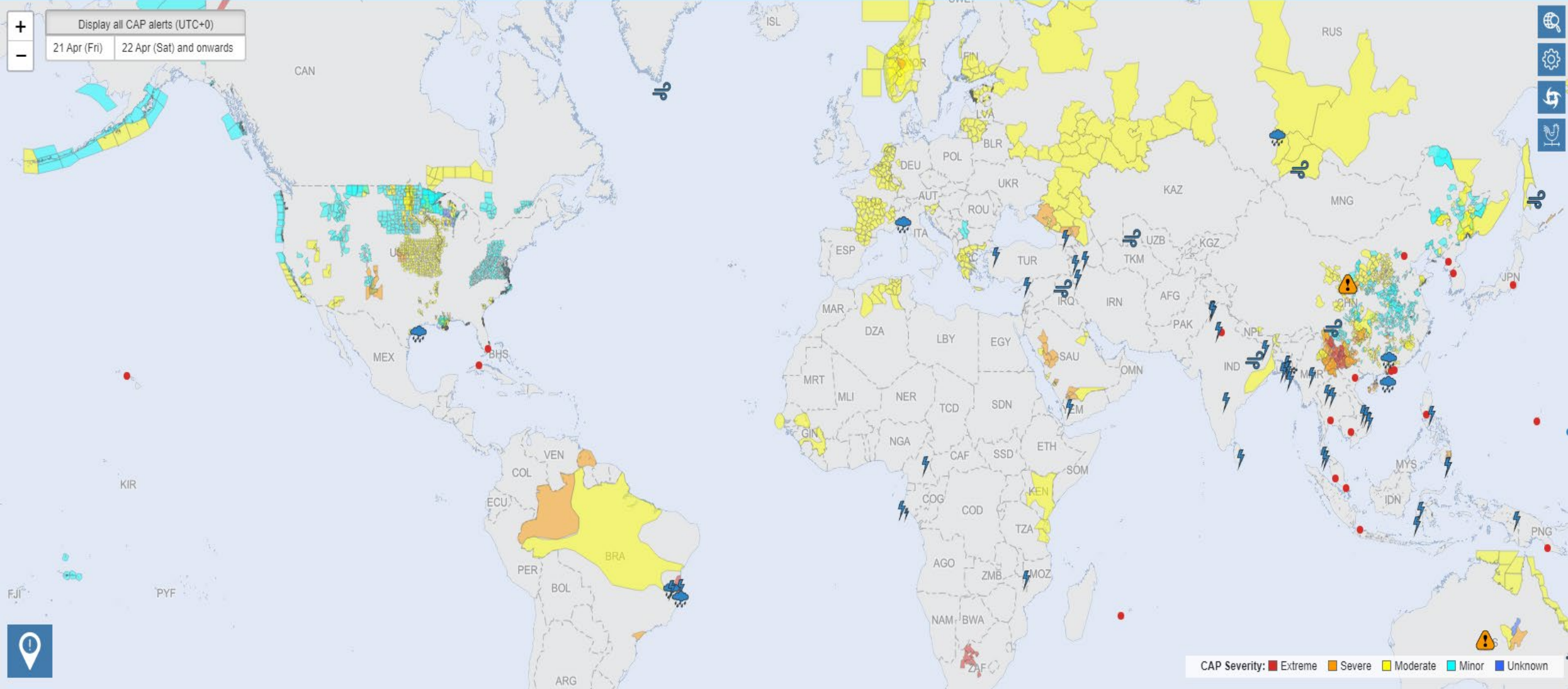
Significant Wave Heights:
4-6 M
6-9 M
9-14 M
14+ M



24 hour composite of max winds and waves
NOAA Global Forecast System



Severe Weather Information Centre 2.0 (Beta)



Display all CAP alerts (UTC+0)

21 Apr (Fri) 22 Apr (Sat) and onwards