

# Historical global ocean wave data simulated with CMIP6 anthropogenic and natural forcings

Anindita Patra, Guillaume Dodet, and Mickael Accensi

Univ. Brest, CNRS, Ifremer, IRD, Laboratoire d'Océanographie Physique et Spatiale, Brest, France

[†anindita.patra@ifremer.fr](mailto:anindita.patra@ifremer.fr)

## List of Parameters from Wavewatch III output

1.	name=MAPSTA standard_name=status map long_name="status map" units="1"
2.	name=dpt standard_name=depth long_name="depth" units="m"
3.	name=uwnd standard_name=eastward_wind long_name="eastward_wind" units="m s-1"
4.	name=vwnd standard_name=northward_wind long_name="northward_wind" units="m s-1"
5.	name=ice standard_name=sea_ice_area_fraction long_name="sea ice area fraction" units="1"
6.	name=hs standard_name=sea_surface_wave_significant_height long_name="significant height of wind and swell waves" units="m"
7.	name=lm long_name="mean wave length" units="m"
8.	name=t02 standard_name=sea_surface_wind_wave_mean_period_from_variance_spectral_densit

	y_second_frequency_moment long_name="mean period T02" units="s"
9.	name=t0m1 standard_name=sea_surface_wind_wave_mean_period_from_variance_spectral_densit y_inverse_frequency_moment long_name="mean period T0m1" units="s"
10.	name=t01 standard_name=sea_surface_wind_wave_mean_period_from_variance_spectral_densit y_first_frequency_moment long_name="mean period T01" units="s"
11.	name=fp long_name="wave peak frequency" units="s-1"
12.	name=dir standard_name=sea_surface_wave_from_direction long_name="wave mean direction" units="degree"
13.	name=spr standard_name=sea_surface_wave_directional_spread long_name="directional spread" units="degree"
14.	name=dp standard_name=sea_surface_wave_peak_direction long_name="peak direction" units="degree"
15.	name=phs0 standard_name=sea_surface_wind_wave_significant_height long_name="wave significant height partition 0" units="m"
16.	name=phs1 standard_name=sea_surface_primary_swell_wave_significant_height long_name="wave significant height partition 1" units="m"
17.	name=phs2 standard_name=sea_surface_secondary_swell_wave_significant_height long_name="wave significant height partition 2" units="m"
18.	name=phs3 standard_name=sea_surface_tertiary_swell_wave_significant_height long_name="wave significant height partition 3" units="m"
19.	name=phs4 standard_name=sea_surface_swell_wave_significant_height long_name="wave significant height partition 4" units="m"
20.	name=phs5 standard_name=sea_surface_swell_wave_significant_height

	long_name="wave significant height partition 5" units="m"
21.	name=ptp0  standard_name=sea_surface_wind_wave_period_at_variance_spectral_density_maximum long_name="peak period partition 0" units="s"
22.	name=ptp1  standard_name=sea_surface_primary_swell_wave_period_at_variance_spectral_density_maximum long_name="peak period partition 1" units="s"
23.	name=ptp2  standard_name=sea_surface_secondary_swell_wave_period_at_variance_spectral_density_maximum long_name="peak period partition 2" units="s"
24.	name=ptp3  standard_name=sea_surface_tertiary_swell_wave_period_at_variance_spectral_density_maximum long_name="peak period partition 3" units="s"
25.	name=ptp4  standard_name=sea_surface_swell_wave_period_at_variance_spectral_density_maximum long_name="peak period partition 4" units="s"
26.	name=ptp5  standard_name=sea_surface_swell_wave_period_at_variance_spectral_density_maximum long_name="peak period partition 5" units="s"
27.	name=plp0 long_name="peak wave length partition 0" units="m"
28.	name=plp1 long_name="peak wave length partition 1" units="m"
29.	name=plp2 long_name="peak wave length partition 2" units="m"
30.	name=plp3 long_name="peak wave length partition 3" units="m"

31.	name=plp4 long_name="peak wave length partition 4" units="m"
32.	name=plp5 long_name="peak wave length partition 5" units="m"
33.	name=pdir0 standard_name=sea_surface_wind_wave_from_direction long_name="wave mean direction partition 0" units="degree"
34.	name=pdir1 standard_name=sea_surface_primary_swell_wave_from_direction long_name="wave mean direction partition 1" units="degree"
35.	name=pdir2 standard_name=sea_surface_secondary_swell_wave_from_direction long_name="wave mean direction partition 2" units="degree"
36.	name=pdir3 standard_name=sea_surface_tertiary_swell_wave_from_direction long_name="wave mean direction partition 3" units="degree"
37.	name=pdir4 standard_name=sea_surface_swell_wave_from_direction long_name="wave mean direction partition 4" units="degree"
38.	name=pdir5 standard_name=sea_surface_swell_wave_from_direction long_name="wave mean direction partition 5" units="degree"
39.	name=pspr0 standard_name=sea_surface_wind_wave_diectional_spread long_name="directional spread partition 0" units="degree"
40.	name=pspr1 standard_name=sea_surface_primary_swell_wave_diectional_spread long_name="directional spread partition 1" units="degree"
41.	name=pspr2 standard_name=sea_surface_secondary_swell_wave_diectional_spread long_name="directional spread partition 2" units="degree"
42.	name=pspr3 standard_name=sea_surface_tertiary_swell_wave_diectional_spread long_name="directional spread partition 3" units="degree"
43.	name=pspr4 standard_name=sea_surface_swell_wave_diectional_spread long_name="directional spread partition 4" units="degree"

44.	<p>name=pspr5      standard_name=sea_surface_swell_wave_diectional_spread      long_name="directional spread partition 5"      units="degree"</p>
45.	<p>name=pws0      long_name="wind sea fraction in partition 0"      units="1"</p>
46.	<p>name=pws1      long_name="wind sea fraction in partition 1"      units="1"</p>
47.	<p>name=pws2      long_name="wind sea fraction in partition 2"      units="1"</p>
48.	<p>name=pws3      long_name="wind sea fraction in partition 3"      units="1"</p>
49.	<p>name=pws4      long_name="wind sea fraction in partition 4"      units="1"</p>
50.	<p>name=pws5      long_name="wind sea fraction in partition 5"      units="1"</p>
51.	<p>name=pdp0</p> <p>standard_name=sea_surface_wind_wave_from_direction_at_variance_spectral_density_maximum      long_name="peak direction partition 0"      units="degree"</p>
52.	<p>name=pdp1</p> <p>standard_name=sea_surface_primary_swell_wave_from_direction_at_variance_spectral_density_maximum      long_name="peak direction partition 1"      units="degree"</p>
53.	<p>name=pdp2</p> <p>standard_name=sea_surface_secondary_swell_wave_from_direction_at_variance_spectral_density_maximum      long_name="peak direction partition 2"      units="degree"</p>
54.	<p>name=pdp3</p> <p>standard_name=sea_surface_tertiary_swell_wave_from_direction_at_variance_spectral_density_maximum      long_name="peak direction partition 3"      units="degree"</p>
55.	<p>name=pdp4</p> <p>standard_name=sea_surface_swell_wave_from_direction_at_variance_spectral_density_maximum</p>

	long_name="peak direction partition 4" units="degree"
56.	name=pdp5  standard_name=sea_surface_swell_wave_from_direction_at_variance_spectral_densit y_maximum long_name="peak direction partition 5" units="degree"
57.	name=tws long_name="wind sea fraction" units="1"
58.	name=uust long_name="eastward friction velocity" units="m s-1"
59.	name=vust long_name="northward friction velocity" units="m s-1"
60.	name=cha  standard_name=charnock_coefficient_for_surface_roughness_length_for_momentum_ in_air long_name="charnock coefficient for surface roughness length for momentum in air" units="1"
61.	name=cge long_name="wave energy flux" units="kW m-1"
62.	name=faw standard_name=wind_mixing_energy_flux_into_sea_water long_name="wind to wave energy flux" units="W m-2"
63.	name=utaw long_name="eastward wave supported wind stress" units="m2 s-2"
64.	name=vtaw long_name="northward wave supported wind stress" units="m2 s-2"
65.	name=utwa long_name="eastward wave to wind stress" units="m2 s-2"
66.	name=vtwa long_name="northward wave to wind stress" units="m2 s-2"
67.	name=wcc long_name="whitecap coverage" units="1"
68.	name=utwo long_name="eastward wave to ocean stress" units="m2 s-2"
69.	name=vtwo

	long_name="northward wave to ocean stress" units="m2 s-2"
70.	name=foc long_name="wave to ocean energy flux" units="W m-2"
71.	name=utus long_name="eastward stokes transport" units="m2 s-1"
72.	name=vtus long_name="northward stokes transport" units="m2 s-1"
73.	name=uuss standard_name=sea_surface_wave_stokes_drift_eastward_velocity long_name="eastward surface stokes drift" units="m s-1"
74.	name=vuss standard_name=sea_surface_wave_stokes_drift_northward_velocity long_name="northward surface stokes drift" units="m s-1"
75.	name=uabr long_name="rms of bottom displacement amplitude zonal" units="m"
76.	name=vabr long_name="rms of bottom displacement amplitude meridional" units="m"
77.	name=uubr long_name="rms of bottom velocity amplitude zonal" units="m s-1"
78.	name=vubr long_name="rms of bottom velocity amplitude meridional" units="m s-1"
79.	name=mssu standard_name=sea_surface_wave_mean_square_upwave_slope long_name="downwave mean square slope" units="1"
80.	name=mssc standard_name=sea_surface_wave_mean_square_crosswave_slope long_name="crosswave mean square slope" units="1"
81.	name=mssd standard_name=sea_surface_mean_square_upwave_slope_direction long_name="u direction for mss" units="degree"