

# Water Column Component

## Classifiers

Standard attributes that are necessary and required to define a habitat type and distinguish one type from another.

System	Depth Zones	Water Column Structure	Salinity	Temperature	Biotic Group	Biotope
Estuarine	Sea surface	Upper (mixed) water layer	Fresh	Frozen	Phytoplankton	(many)
Freshwater - influenced	Epipelagic	Pycnocline	Oligohaline	Superchilled	Zooplankton (includes ichthyoplankton)	
Nearshore marine	Mesopelagic	Bottom water layer	Mesohaline	Cold	Floating microbial mat	
Neritic	Bathypelagic	Benthic boundary layer	Polyhaline	Temperate	Floating macroalgae	
Oceanic	Abyssalpelagic	Non-stratified	Euhaline	Warm	Floating vascular vegetation	
Lacustrine	Hadalpelagic		Hyperhaline	Hot		

## Hydroforms

Large physical phenomena formed by water movements within a system that influence biotope composition.

Coastal water mass	Density current	Entrainment	Hydrothermal plume	Internal wave	Salt wedge	Turbidity maximum
Downwelling	Divergence	Freshwater lens	Ice	Langmuir cell	Surf	Upwelling
Convergence	Cold core rings	Frontal boundary	Plunging current	Eddy	Surface foam	Warm core ring
Counter current		Groundwater seep	River/stream current	Oxygen minimum	Surface wave	
Current		Gyre		Plume	Turbidity current	

**UK SeaMap**  
**Shelf Salinity - summer**



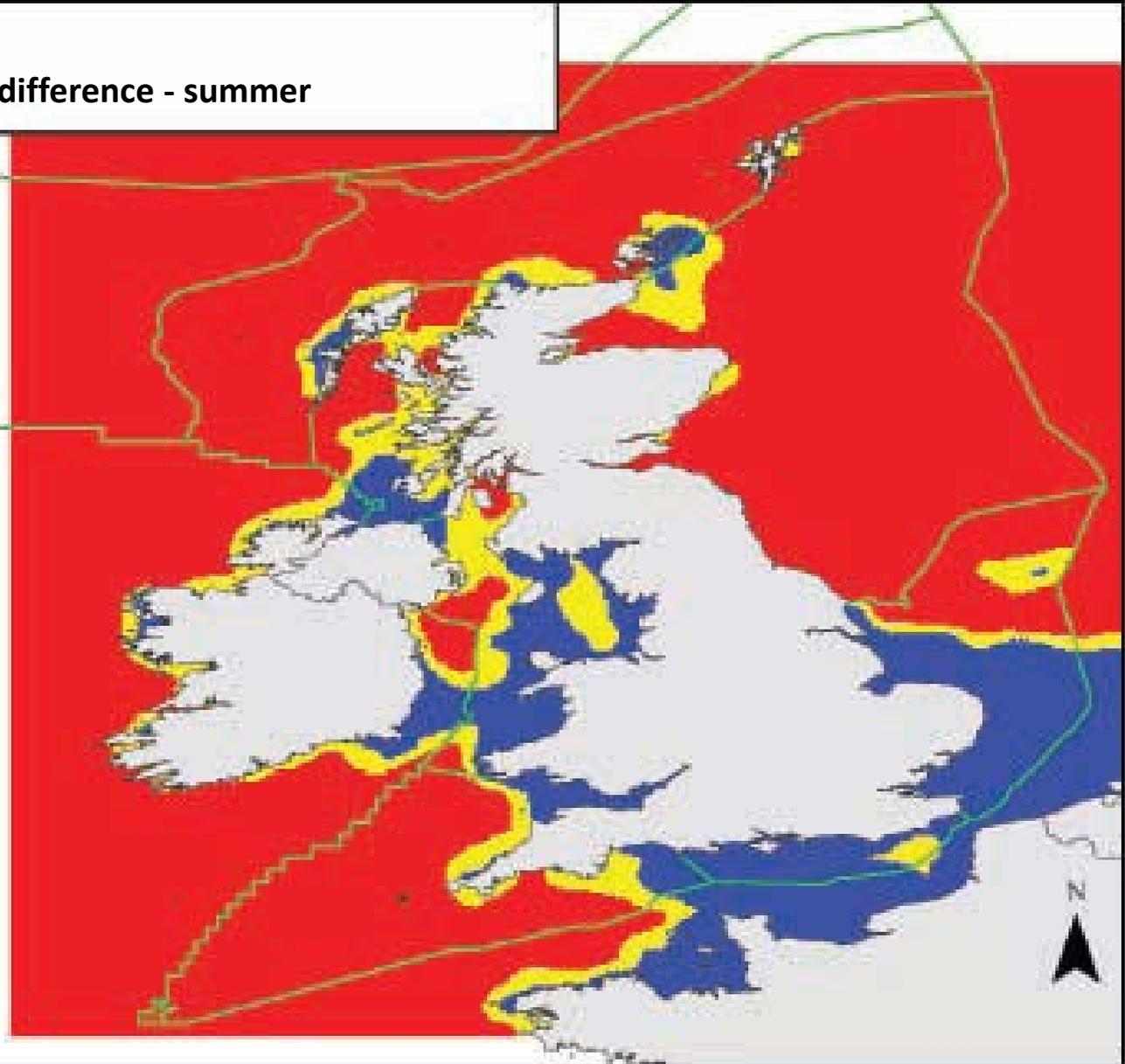
-  Regional Seas
-  Salinity: Oceanic
-  Salinity: Shelf
-  Salinity: ROFI
-  Salinity: Enclosed coast

# UK SeaMap

## Surface to seabed temperature difference - summer

Classes (°C)

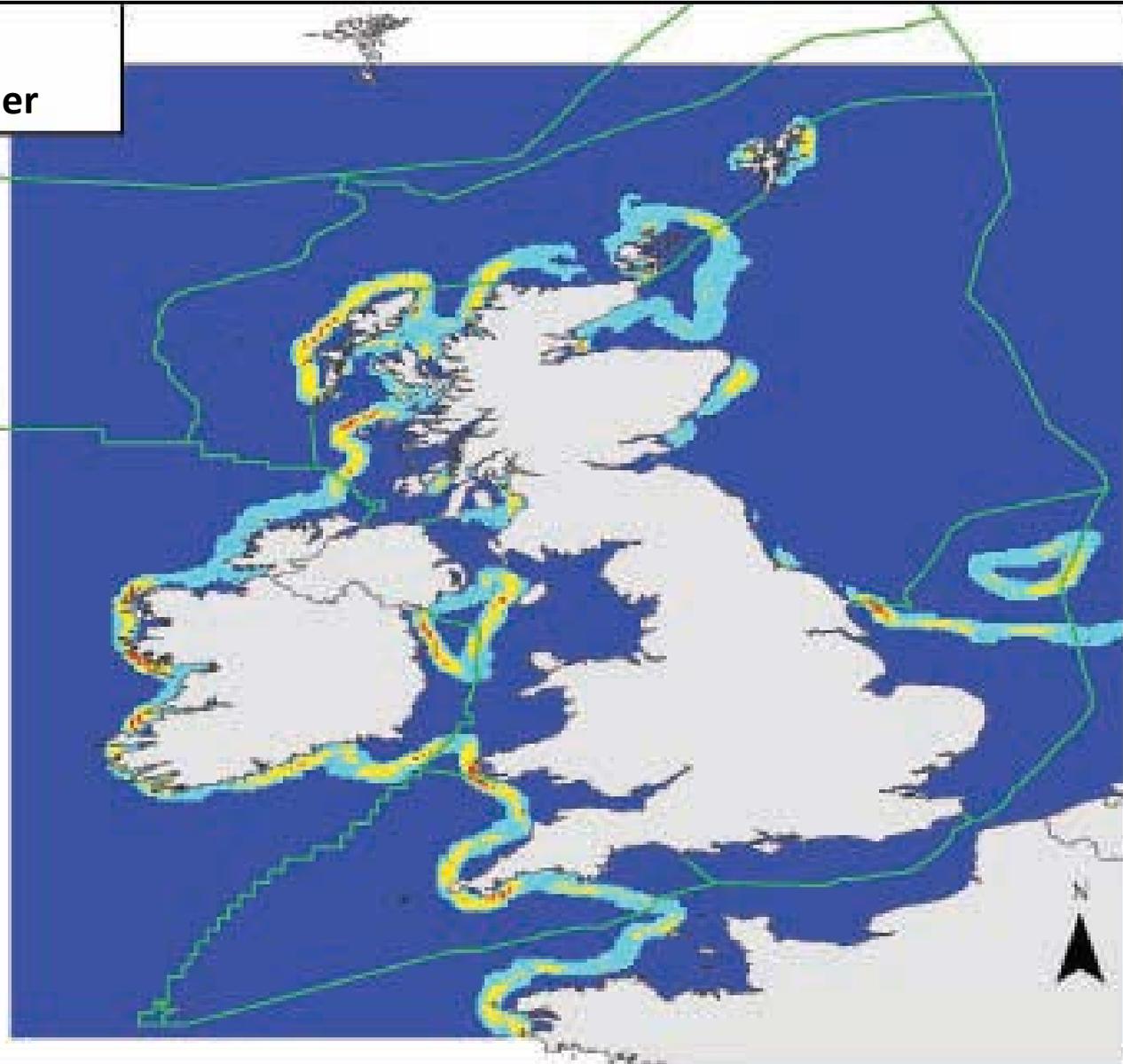
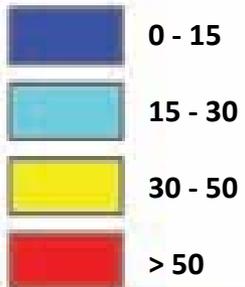
-  Well mixed (0.0 - 0.5)
-  Frontal (0.5 - 2.0)
-  Stratified (> 2.0)



# UK SeaMap

## Probability of fronts - summer

### Classes (%)



# UKSeaMap

## Water column features analysis

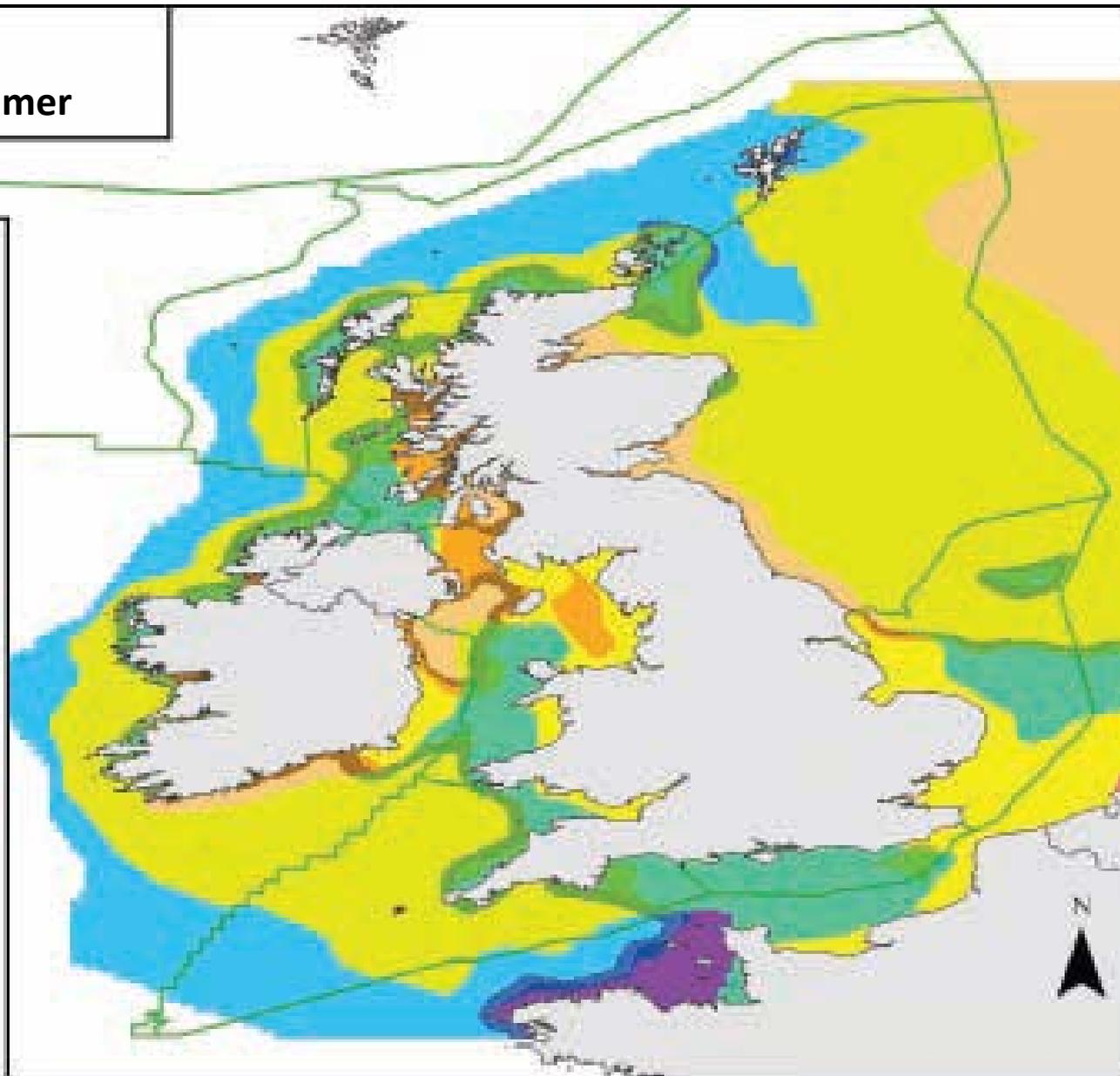
Salinity (‰)	Surface to seabed temperature difference (°C)	Fronts (% probability)	Water column type
<hr/>			
Estuarine (<=30)			Estuarine water
<hr/>			
ROFI (>30 and <=34)	Well-mixed (<=0.5)	0	Well-mixed ROFI
	Frontal (>0.5 and <=2.0)	No Front (<15%)	Weakly-stratified ROFI
		Front (>15%)	Frontal ROFI
	Stratified (>2.0)		Stratified ROFI
<hr/>			
Shelf (>34 and <=35)	Well-mixed (<=0.5)	0	Well-mixed shelf water
	Frontal (>0.5 and <=2.0)	No Front (<15%)	Weakly-stratified shelf water
		Front (>15%)	Frontal shelf water
	Stratified (>2.0)		Stratified shelf water
<hr/>			
Oceanic (>35)	Well-mixed (<=0.5)	0	Well-mixed oceanic water
	Frontal (>0.5 and <=2.0)	No Front (<15%)	Weakly-stratified oceanic water
		Front (>15%)	Frontal oceanic water
	Stratified (>2.0)		Stratified oceanic water

# UKSeaMap

## Water column features – summer

### Types

- Estuarine water
- Well-mixed ROFI
- Weakly-stratified ROFI
- Frontal ROFI
- Stratified ROFI
- Well-mixed shelf water
- Weakly-stratified shelf water
- Frontal shelf water
- Stratified shelf water
- Well-mixed oceanic water
- Weakly-stratified oceanic water
- Frontal oceanic water
- Stratified oceanic water



<b>Modifiers</b>			
Standard attributes that can be applied when additional information is needed to further characterize an identified type for individual applications.			
<b>Oxygen</b>	<b>Turbidity</b>	<b>Photic Quality</b>	<b>Productivity</b>
Anoxic	Extremely turbid	Photic	Oligotrophic
Hypoxic	Highly turbid	Aphotic	Mesotrophic
Oxic	Moderately turbid	Seasonally photic	Eutrophic
Oxygen saturated	Clear		
Oxygen supersaturated	Extremely clear		

**WCC coding: \_w:Cwm.UL.2.ph.wm.pp.Dinoflagellates.ox.ht.ph.eu**

Hydroform = coastal water mass (Cwm)

### Classifiers

Structure = upper layer (UL)

Depth = mesopelagic (2)

Salinity = polyhaline (ph)

Temperature = warm (wm)

Biotope group = phytoplankton (pp)

Biotope = dominant lifeform

### Modifiers

Oxygen = oxic (oxic)

Turbidity = highly turbid (hitd)

Photic Quality = photic (phot)

Productivity = euphotic (euph)