

OHI+ South West England: Severn Estuary & Bristol



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Summary

The Severn Estuary & Bristol Channel region (SBC-4; final score 66) was the equal third best performing region within the assessment (Figure 1). The region showed relatively high variation from the South West central index for a variety of goals (Figure 2). This likely reflects the region's distinct geography, ecology, population and settlements (large, clustered), and small marine area (903 km²). The region scored notably highly for the Designated Areas: Ecological Features and Fisheries sub-goals, but poorly for Livelihoods and Carbon Storage (Table 1).

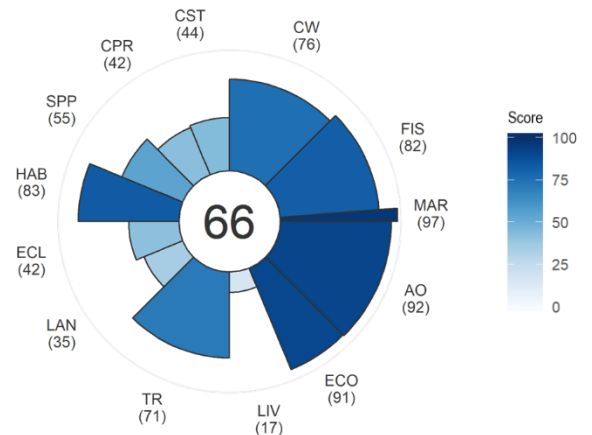


Figure 1. Severn Estuary & Bristol Channel goal[†] and central score.

High scoring goals and datasets

Designated Areas. The Severn Estuary scored 42 for Designated Areas: *Ecological Features* sub-goal (Table 1); twice that of the south west assessment area mean average. This high score was in part influenced by the region's small geographic area and the presence of the Severn Estuary SAC covering 51% of its marine area. This score contrasts with the *Landscapes* sub-goal, measuring designated areas for cultural and aesthetic reasons, which scored (35) lower than the South West average.

Fisheries. The Severn Estuary & Bristol Channel scored 82 for the Food Provision: Fisheries sub-goal. The region has limited fishing activity, with landings of 430 kg in 2018 comprised exclusively of crab and

European lobster (*Homarus gammarus*) stocks, considered relatively sustainable. As all landings were attributed to under ten-metre vessels the Artisanal Opportunities goal also received a high goal score.

Low scoring goals and datasets

Livelihoods & Economies. The Severn Estuary and Bristol Channel scored 17 for the Livelihoods sub-goal. The next lowest scoring region was South East Devon with 33, and a South West average of 56. The low score for the region is a result of wages in the region not increasing in line with the

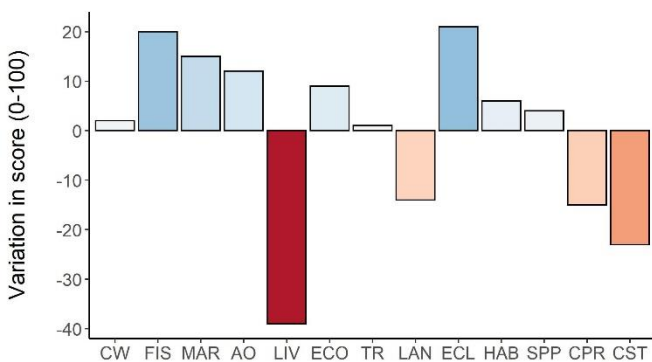


Figure 2. variation from the South West OHI+ central index score by goal. [†]CW (clean waters); FIS (fisheries), MAR (mariculture), AO (Artisanal Opportunities), ECO (Economy), LIV (Livelihoods), TR (Tourism), LAN (Landscapes), ECL (Ecological Features), HAB (Habitats), SPP (Species), CPR (Coastal Protection), CST (Carbon Storage).

national Consumer Price Index (CPI) and coupled with a year-on-year decline in marine-related jobs (i.e. boat building and repair, fish processing). This decline was the largest decline of any region, with a 50% reduction between 2014 (n=182 jobs) and 2018 (n=90 jobs). Available data represent a best estimate of marine-related jobs from registered employees and certain marine industries (see Marine Wages & Jobs), so may not capture the entire workforce.

Coastal Systems. The region performed poorly for the Coastal Systems sub-goals (Table 1). No seagrass or maerl sites occur within the region’s boundaries, making the *Carbon Storage* sub-goal a direct measure of SSSI designated saltmarsh and mudflats. As much of the region is estuarine it contains extensive habitats with high carbon sequestration value. This makes the region’s low score for the Carbon Storage sub-goal concerning. Only 22% sites were monitored within the last six years (2013 - 2018) and almost 20% (20 of 102 sites) assessed as being in an unfavourable condition. Extensive monitoring of these sites was conducted in 2010 but since this time monitoring has been limited, with a maximum of 22 sites monitored in a single year (2014).

Recommendations and limitation

Given the importance and size (58 km²) of the Severn Estuary’s mudflat habitats, the lack of monitoring in recent years is cause for concern. The region’s SSSI littoral sediment sites should be considered a priority for future monitoring and management. In future, OHI+ assessments involving a more holistic measure of carbon sequestration would be beneficial. The Severn Estuary region would likely see a substantial increase in its status score if the sub-goal directly measured the carbon sequestration budgets of each region (combining known sequestration rates (tonnes CO₂) of habitats by the total area (km²)).

The region had limited data to inform several goals including the *Artisanal Opportunities* goal and the *Food Provision: Fisheries* sub-goal. Data scarcity likely reflects the low level of fishing effort in the region rather than missing data. Limited landings (430 kg in 2018) were only recorded at a single port, Bridgewater, and only during certain years (2017 and 2018). These low levels of fishing activity need acknowledging when comparing against other regions such as Cornwall which landed in excess of 18,600 tonnes.

Table 1. Severn Estuary & Bristol Channel best (green) and worst (red) performing goals compared to the OHI+ SW central index score.

GOAL	STATUS	TREND	PRESS.	RES.	FUTURE	SCORE	SW SCORE	DIFF.
Ecological Feat.	41	0	79	92	42	42	21	21
Fisheries	77	NA	38	76	87	82	62	20
Mariculture	94	1	81	81	100	97	82	15
Coastal Protection	54	-0.6	82	78	31	43	58	-15
Carbon Storage	55	-0.6	76	78	33	44	67	-23
Clean Waters	25	-1	57	69	9	17	56	-39