

**Table S1.** Coordinates of permanently marked control points in the indoor hall of the covering the oyster reef (see also Figure 2a in Djuricic et al., 2016). The ACS (acquisition coordinate system) is levelled, i.e. the Z-axis follows the plumb line. The LACS (local analysis coordinate system) is oriented to follow the strike and dip directions of the oyster reef. UTM is in Zone 33N. Additionally, the orthometric height is given to provide easting, northing and height above sea level, considering the geoid undulation of 44.58 m. All coordinates are given in meters.

Point ID	ACS			LACS			UTM			
	X	Y	Z	X	Y	Z	E	N	U	H
1	-2.974	17.710	-1.884	44.646	26.750	13.603	600662.374	5358036.460	226.223	181.643
2	-7.026	17.504	-1.600	40.751	26.467	12.468	600666.376	5358037.118	226.508	181.928
4	-16.923	18.503	2.094	30.171	27.277	12.501	600676.318	5358037.229	230.203	185.623
6	-17.417	7.761	1.146	30.228	16.527	11.511	600675.607	5358047.957	229.268	184.688
10	-18.168	-8.339	0.987	29.866	0.416	11.209	600674.550	5358064.034	229.127	184.547

**Table S2.** Transformation between coordinate systems (CS). Generally, the transformations follow the definition of  $P' = T + sRP$ , where P is the point in the source coordinate system, P' the point in the target coordinate system, T a translation, s the scale factor, and R a rotation matrix (orthogonal matrix).

Source CS	Target CS	$T$	$s$	$R$
ACS	UTM (ENU)	$\begin{pmatrix} 600657.436 \\ 5358053.718 \\ 228.125 \end{pmatrix}$	0.999677	$\begin{pmatrix} -0.9937099 & 0.1119843 & -0.0002257 \\ -0.1119840 & -0.9937093 & -0.0011630 \\ -0.0003545 & -0.0011304 & 0.9999993 \end{pmatrix}$
ACS	LACS	$\begin{pmatrix} 47.100 \\ 9.100 \\ 16.517 \end{pmatrix}$	1	$\begin{pmatrix} 0.9379668 & -0.0178940 & -0.346263 \\ 0.0190740 & 0.9998181 & 0 \\ 0.3462001 & -0.0066046 & 0.9381374 \end{pmatrix}$
UTM (ENU)	UTM E, UTM N, ortho H	$\begin{pmatrix} 0 \\ 0 \\ -44.58 \end{pmatrix}$	1	$I_{3,3}$