

**Figure S4.** A) Non-metric multidimensional scaling (nMDS) ordination of the sponge bacterial communities and sea-water bacterial samples based on Bray-Curtis distances coloured by their belonginess to impacted (orange) or well-preserved (blue) environment.

B) Box plot of the Shannon diversity indices of sea water bacterial communities from the impacted (orange) or well-preserved (blue) environments.

Water samples were collected during the same sampling dates as the study sponges (see Turon et al. (2018) for raw data).