

**Table S4.** Mean species density ( $\pm$  s.d.), total number of individuals, and mean number of individuals for each macroinvertebrate species per 20 m<sup>2</sup> in the subtidal area, categorized by zone and time studied.

| Subtidal macroinvertebrate metrics                                      |                 |                       |               | Lava flows<br>2 months | Control zone<br>2 months | Lava flows<br>4.5 months | Control zone<br>4.5 months | Lava flows<br>7 months | Control zone<br>7 months |
|-------------------------------------------------------------------------|-----------------|-----------------------|---------------|------------------------|--------------------------|--------------------------|----------------------------|------------------------|--------------------------|
| Species density                                                         |                 |                       |               | 1.50 $\pm$ 0.61        | 3.83 $\pm$ 1.65          | 1.59 $\pm$ 0.88          | 3.00 $\pm$ 1.14            | 1.93 $\pm$ 0.87        | 3.11 $\pm$ 1.34          |
| Total number of individuals                                             |                 |                       |               | 13.28 $\pm$ 15.47      | 15.83 $\pm$ 6.75         | 12.15 $\pm$ 5.93         | 7.70 $\pm$ 4.13            | 26.04 $\pm$ 16.44      | 10.59 $\pm$ 4.02         |
| Species                                                                 | Family          | Order                 | Phylum        |                        |                          |                          |                            |                        |                          |
| <i>Hermodice carunculata</i> (Pallas, 1766)                             | Amphinomidae    | Amphinomida           | Annelida      | 1.06 $\pm$ 2.07        | 5.72 $\pm$ 4.78          | 0.11 $\pm$ 0.32          | 2.52 $\pm$ 2.34            | 0.33 $\pm$ 1.35        | 5.63 $\pm$ 3.82          |
| <i>Stenorhynchus lanceolatus</i> (Brullé, 1837)                         | Inachoididae    | Decapoda              | Arthropoda    |                        | 0.28 $\pm$ 0.46          |                          | 0.30 $\pm$ 0.99            |                        | 0.11 $\pm$ 0.32          |
| <i>Pagurus</i> sp.                                                      | Paguridae       | Decapoda              | Arthropoda    |                        | 0.72 $\pm$ 1.63          |                          |                            |                        | 0.22 $\pm$ 0.69          |
| <i>Percnon gibbesi</i> (H. Milne Edwards, 1853)                         | Percnidae       | Decapoda              | Arthropoda    | 12.11 $\pm$ 15.63      | 4.39 $\pm$ 6.44          | 10.89 $\pm$ 6.31         | 0.37 $\pm$ 1.14            | 17.26 $\pm$ 13.45      | 1.22 $\pm$ 2.57          |
| <i>Cronius ruber</i> (Lamarck, 1818)                                    | Portunidae      | Decapoda              | Arthropoda    |                        |                          |                          |                            | 0.07 $\pm$ 0.26        | 0.04 $\pm$ 0.19          |
| <i>Ascidia mentula</i> Müller, 1776                                     | Asciidiidae     | Phlebobranchia        | Chordata      |                        | 0.22 $\pm$ 0.64          | 0.67 $\pm$ 2.01          |                            | 0.33 $\pm$ 1.27        |                          |
| <i>Ciona</i> sp.                                                        | Cionidae        | Phlebobranchia        | Chordata      |                        |                          | 0.22 $\pm$ 0.64          |                            | 0.04 $\pm$ 0.19        |                          |
| <i>Actinostella flosculifera</i> (Le Sueur, 1817)                       | Actiniidae      | Actinaria             | Cnidaria      |                        |                          |                          |                            |                        | 0.04 $\pm$ 0.19          |
| <i>Alicia mirabilis</i> Johnson, 1861                                   | Aliciidae       | Actinaria             | Cnidaria      | 0.11 $\pm$ 0.32        |                          | 0.22 $\pm$ 0.64          |                            |                        |                          |
| <i>Isarachnanthus maderensis</i> (Johnson, 1861)                        | Arachnactidae   | Penicillaria          | Cnidaria      |                        |                          |                          | 0.04 $\pm$ 0.19            |                        |                          |
| <i>Pachycerianthus dohrni</i> (van Beneden, 1924)                       | Cerianthidae    | Spirularia            | Cnidaria      |                        |                          |                          | 0.30 $\pm$ 0.72            |                        | 0.07 $\pm$ 0.26          |
| <i>Euapta lappa</i> (J. Müller, 1850)                                   | Synaptidae      | Apodida               | Echinodermata |                        |                          |                          | 0.04 $\pm$ 0.19            |                        | 0.04 $\pm$ 0.19          |
| <i>Arbacia lixula</i> (Linnaeus, 1758)                                  | Arbaciidae      | Arbacioida            | Echinodermata |                        | 0.06 $\pm$ 0.23          |                          | 0.07 $\pm$ 0.26            | 0.52 $\pm$ 1.69        | 0.04 $\pm$ 0.19          |
| <i>Antedon bifida</i> (Pennant, 1777)                                   | Antedonidae     | Comatulida            | Echinodermata |                        |                          | 0.04 $\pm$ 0.19          | 0.07 $\pm$ 0.26            | 7.48 $\pm$ 13.37       | 0.52 $\pm$ 1.94          |
| <i>Diadema africanum</i> Rodríguez, Hernández, Clemente & Coppard, 2013 | Diadematiidae   | Diadematoidea         | Echinodermata |                        | 0.94 $\pm$ 1.21          |                          | 1.15 $\pm$ 1.13            |                        | 0.56 $\pm$ 1.05          |
| <i>Coscinasterias tenuispina</i> (Lamarck, 1816)                        | Asteriidae      | Forcipulatida         | Echinodermata |                        |                          |                          | 0.07 $\pm$ 0.26            |                        | 0.11 $\pm$ 0.32          |
| <i>Holothuria sanctori</i> Delle Chiaje, 1824                           | Holothuriidae   | Holothuriida          | Echinodermata |                        | 2.22 $\pm$ 3.50          |                          | 2.74 $\pm$ 3.06            |                        | 1.74 $\pm$ 1.99          |
| Unidentified Gastropoda                                                 | -               | -                     | Mollusca      |                        | 0.78 $\pm$ 1.51          |                          |                            |                        | 0.19 $\pm$ 0.62          |
| <i>Patella ordinaria</i> Mabilie, 1888                                  | Patellidae      | Gastropoda            | Mollusca      |                        | 0.11 $\pm$ 0.32          |                          |                            |                        |                          |
|                                                                         |                 | <i>incertae sedis</i> |               |                        |                          |                          |                            |                        |                          |
| <i>Charonia variegata</i> (Lamarck, 1816)                               | Charoniidae     | Littorinimorpha       | Mollusca      |                        | 0.17 $\pm$ 0.38          |                          |                            |                        |                          |
| <i>Felimare picta</i> (Philippi, 1836)                                  | Chromodorididae | Nudibranchia          | Mollusca      |                        | 0.06 $\pm$ 0.23          |                          |                            |                        |                          |
| <i>Pinna rudis</i> Linnaeus, 1758                                       | Pinnidae        | Ostreida              | Mollusca      |                        | 0.11 $\pm$ 0.32          |                          | 0.04 $\pm$ 0.19            |                        | 0.04 $\pm$ 0.19          |
| <i>Tylodina perversa</i> (Gmelin, 1791)                                 | Tylodiidae      | Umbraculida           | Mollusca      |                        | 0.06 $\pm$ 0.23          |                          |                            |                        | 0.04 $\pm$ 0.19          |