## Species Diversity

Three diversity indices were used to determine the diversity of species across sampling sites, sampling seasons and different phases of the moon; the indices used included the Shannon weaver diversity index, Simpson’s and inverse Simpson’s diversity index. The indices were fairly consisted across the grouping variables which included the seasons, moon phase and seasons. Regarding the sampling sites, SBE1, the first station had the highest diversity followed by SBE2, then SBE4 while SBE3 trailed with the lowest diversity. The results are as illustrated in the tables below.

## Diversity across sampling sites

|  | Ecological Divesity Indices | | |
| --- | --- | --- | --- |
| Site | shannon | simpson | inverse\_simpson |
| SBE1 | 1.8947475 | 0.7576789 | 4.126756 |
| SBE2 | 1.4892124 | 0.6344260 | 2.735424 |
| SBE3 | 0.8700680 | 0.3525871 | 1.544609 |
| SBE4 | 0.9421475 | 0.3839985 | 1.623373 |

## Diversity across seasons

The diversity of caught species was higher in the dry season compared with the wet season.

|  | Ecological Divesity Indices | | |
| --- | --- | --- | --- |
| Season | shannon | simpson | inverse\_simpson |
| Wet | 1.213436 | 0.4642996 | 1.866715 |
| Dry | 1.260849 | 0.5633560 | 2.290195 |

## Divesity across moon phases

The last quarter phase of the moon experienced higher diversity followed by the full moon, then wanning gibbous, then first quarter while the waxing crescent had the lowest diversity index.

|  | Ecological Divesity Indices | | |
| --- | --- | --- | --- |
| Moon\_Phase | shannon | simpson | inverse\_simpson |
| Last Quarter | 1.9000379 | 0.7588430 | 4.146676 |
| Waxing Creascent | 0.7964051 | 0.3070939 | 1.443197 |
| First Quarter | 1.0443225 | 0.4588839 | 1.848032 |
| Wanning Gibbous | 1.3047799 | 0.5472546 | 2.208747 |
| Full moon | 1.4322595 | 0.7328000 | 3.742515 |