Box 1. The observed (this study) and potential (other studies) effects of the selected environmental variables on bryophytes communities in Seasonally Dry Tropical Forests.

| **Environmental variables** | **Impact on Bryophyte Communities in the Caatinga** | **Reference** |
| --- | --- | --- |
| Elevation (EL): | Positively affects richness and composition due to changes in precipitation, humidity, and temperature at different altitudinal levels. | This research; Araújo et al., (2022) |
| Aridity index (AI): | Positively affects richness and composition, particularly concerning humidity conditions; acts as an important environmental filter. | This research; Silva & Souza (2018) |
| Mean Diurnal Range (Mean of monthly (max temp - min temp)) (BIO2): | Negatively affects richness; community composition is vulnerable to significant temperature variations. | This research; Furness & Grime (1982). |
| Precipitation Seasonality (BIO15): | Community composition is vulnerable to the seasonality of precipitation; it may influence the reproduction and adaptation of bryophytes during seasonal changes. | This research; Nunes, Campelo & Maciel-Silva (2018) |
| Precipitation of Warmest Quarter (BIO18): | Community composition is vulnerable during hotter and drier periods of the year; it may impact the physiology of bryophytes, including photosynthetic activity. | This research; Silva, Maciel-Silva & Santos (2018); Greenwood, Stark & Chiquoine (2019) |
| Temperature Seasonality (BIO4): | Positively affects richness; some bryophytes may be adapted to seasonal fluctuations. | This research; Wang *et al*. (2019) |