**DESCRIPTIVE FILE**

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| --- | --- | --- | --- | --- | --- |
| **File name** | **Storage** | **Geometry** | **EPSG** | **Feature count** | **Size (MB)** |
| base\_env\_cameta | ESRI Shapefile | Polygon (MultiPolygon) | 31982 | 4154 | 1.19 |
| clusters\_env\_cameta | ESRI Shapefile | Polygon (MultiPolygon) | 31982 | 4154 | 1.70 |
| base\_env\_santarem | ESRI Shapefile | Polygon (MultiPolygon) | 31981 | 13621 | 26.52 |
| clusters\_env\_santarem | ESRI Shapefile | Polygon (MultiPolygon) | 31981 | 13621 | 5.08 |

**Description:** cellular grids with the environmental dimension variables and classification of the cities of Santarém and Cametá, PA - Brazil.

**Data source for creating the variables:**

* Land cover classification: amazonULC (Santos et al., 2023).
* Digital Elevation Models: Topodata (Valeriano & Rossetti, 2012).

**Reference**

Santos, B. D. dos, Pinho, C. M. D. de, Amaral, S., & Paez, A. (2023). amazonULC: A Data Package with Urban Land Cover Classifications for a  Selection of Cities in the Brazilian Amazon. *Environment and Planning B*, 1–8.

Valeriano, M. de M., & Rossetti, D. de F. (2012). Topodata: Brazilian full coverage refinement of SRTM data. *Applied Geography*, *32*(2), 300–309.

Table 1 – Environmental dimension variables and information about the evaluation criteria, type, and description of the features.

|  |  |  |  |
| --- | --- | --- | --- |
| **Feature** | **Criteria** | **Type** | **Description** |
| ID | - | Integer64 | Unique identifier of the cell. |
| AWMPFD\_EG | Land cover | Real | AWMPFD stands for Area-weighted Mean Patch Fractal Dimension of exposed ground. |
| AWMPFD\_HV | Land cover | Real | AWMPFD stands for Area-weighted Mean Patch Fractal Dimension of herbaceous vegetation. |
| AWMPFD\_SV | Land cover | Real | AWMPFD stands for Area-weighted Mean Patch Fractal Dimension of shrub vegetation. |
| AWMPFD\_Wa | Land cover | Real | AWMPFD stands for Area-weighted Mean Patch Fractal Dimension of water. |
| AWMSI\_EG | Land cover | Real | Area-Weighted Mean Shape Index. Calculated for the exposed ground. |
| AWMSI\_HV | Land cover | Real | Area-Weighted Mean Shape Index. Calculated for the herbaceous vegetation. |
| AWMSI\_SV | Land cover | Real | Area-Weighted Mean Shape Index. Calculated for the shrub vegetation. |
| AWMSI\_Wa | Land cover | Real | Area-Weighted Mean Shape Index. Calculated for the water. |
| BIA\_EG | Land cover | Real | Biggest Intersection Area of exposed ground. |
| BIA\_HV | Land cover | Real | Biggest Intersection Area of herbaceous vegetation. |
| BIA\_SV | Land cover | Real | Biggest Intersection Area of shrub vegetation. |
| BIA\_Wa | Land cover | Real | Biggest Intersection Area of water. |
| C\_ENV | - | Integer64 | Clustering result using the environmental dimension features. |
| CA\_EG | Land cover | Real | Total area of the ceramic roof exposed ground. |
| CA\_HV | Land cover | Real | Total area of herbaceous vegetation. |
| CA\_SV | Land cover | Real | Total area of shrub vegetation. |
| CA\_Wa | Land cover | Real | Total area of water. |
| ED\_EG | Land cover | Real | Edge Density of exposed ground. |
| ED\_HV | Land cover | Real | Edge Density of herbaceous vegetation. |
| ED\_SV | Land cover | Real | Edge Density of shrub vegetation. |
| ED\_Wa | Land cover | Real | Edge Density of water. |
| HND\_MAX | HAND | Real | Maximum value of the HAND. |
| HND\_MEAN | HAND | Real | Average value of the HAND. |
| HND\_MIN | HAND | Real | Minimum value of the HAND. |
| HND\_RANGE | HAND | Real | Range value of the HAND. |
| HND\_SUM | HAND | Real | Sum value of the HAND. |
| HND\_VAR | HAND | Real | Variance value of the HAND. |
| IJI\_EG | Land cover | Real | IJI stands for Interspersion and Juxtaposition Index. Calculated for the exposed ground. |
| IJI\_HV | Land cover | Real | IJI stands for Interspersion and Juxtaposition Index. Calculated for the herbaceous vegetation. |
| IJI\_SV | Land cover | Real | IJI stands for Interspersion and Juxtaposition Index. Calculated for the shrub vegetation. |
| IJI\_Wa | Land cover | Real | IJI stands for Interspersion and Juxtaposition Index. Calculated for the water. |
| LSI\_EG | Land cover | Real | Shape Index of exposed ground. |
| LSI\_HV | Land cover | Real | Shape Index of herbaceous vegetation. |
| LSI\_SV | Land cover | Real | Shape Index of shrub vegetation. |
| LSI\_Wa | Land cover | Real | Shape Index of water. |
| MPAR\_EG | Land cover | Real | Mean Perimeter Area Ratio of exposed ground. |
| MPAR\_HV | Land cover | Real | Mean Perimeter Area Ratio of herbaceous vegetation. |
| MPAR\_SV | Land cover | Real | Mean Perimeter Area Ratio of shrub vegetation. |
| MPAR\_Wa | Land cover | Real | Mean Perimeter Area Ratio of water. |
| MPFD\_EG | Land cover | Real | Mean Patch Fractal Dimension. Calculated for the exposed ground. |
| MPFD\_HV | Land cover | Real | Mean Patch Fractal Dimension. Calculated for the herbaceous vegetation. |
| MPFD\_SV | Land cover | Real | Mean Patch Fractal Dimension. Calculated for the shrub vegetation. |
| MPFD\_Wa | Land cover | Real | Mean Patch Fractal Dimension. Calculated for the water. |
| MPS\_EG | Land cover | Real | Mean Patch Fractal Dimension. Calculated for the exposed ground. |
| MPS\_HV | Land cover | Real | Mean Patch Fractal Dimension. Calculated for the herbaceous vegetation. |
| MPS\_SV | Land cover | Real | Mean Patch Fractal Dimension. Calculated for the shrub vegetation. |
| MPS\_Wa | Land cover | Real | Mean Patch Fractal Dimension. Calculated for the water. |
| MSI\_EG | Land cover | Real | Mean Shape Index. Calculated for the exposed ground. |
| MSI\_HV | Land cover | Real | Mean Shape Index. Calculated for the herbaceous vegetation. |
| MSI\_SV | Land cover | Real | Mean Shape Index. Calculated for the shrub vegetation. |
| MSI\_Wa | Land cover | Real | Mean Shape Index. Calculated for the water. |
| NP\_EG | Land cover | Real | Number of patches. Calculated for the exposed ground. |
| NP\_HV | Land cover | Real | Number of patches. Calculated for the herbaceous vegetation. |
| NP\_SV | Land cover | Real | Number of patches. Calculated for the shrub vegetation. |
| NP\_Wa | Land cover | Real | Number of patches. Calculated for the water. |
| Occupied | Land cover | Integer64 | Cell with presence of built-up area. |
| PD\_EG | Land cover | Real | Patch Density. Calculated for the exposed ground. |
| PD\_HV | Land cover | Real | Patch Density. Calculated for the herbaceous vegetation. |
| PD\_SV | Land cover | Real | Patch Density. Calculated for the shrub vegetation. |
| PD\_Wa | Land cover | Real | Patch Density. Calculated for the water. |
| PLAND\_EG | Land cover | Real | It is equals the sum of the areas of all patches of the corresponding patch type (class), divided by total landscape area. It is equals to the percentage the landscape comprised of the corresponding patch type (class). Calculated for the exposed ground. |
| PLAND\_HV | Land cover | Real | It is equals the sum of the areas of all patches of the corresponding patch type (class), divided by total landscape area. It is equals to the percentage the landscape comprised of the corresponding patch type (class). Calculated for the herbaceous vegetation. |
| PLAND\_SV | Land cover | Real | It is equals the sum of the areas of all patches of the corresponding patch type (class), divided by total landscape area. It is equals to the percentage the landscape comprised of the corresponding patch type (class). Calculated for the shrub vegetation. |
| PLAND\_Wa | Land cover | Real | It is equals the sum of the areas of all patches of the corresponding patch type (class), divided by total landscape area. It is equals to the percentage the landscape comprised of the corresponding patch type (class). Calculated for the water. |
| PRD\_ENV | Land cover | Real | PRD stands for Patch Richness Density, which is equals the number of different patch types present within the landscape boundary divided by total landscape area. |
| PSCOV\_EG | Land cover | Real | Patch Size Coefficient of Variation. Calculated for the exposed ground. |
| PSCOV\_HV | Land cover | Real | Patch Size Coefficient of Variation. Calculated for the herbaceous vegetation. |
| PSCOV\_SV | Land cover | Real | Patch Size Coefficient of Variation. Calculated for the shrub vegetation. |
| PSCOV\_Wa | Land cover | Real | Patch Size Coefficient of Variation. Calculated for the water. |
| PSSD\_EG | Land cover | Real | Patch Size Standard Deviation. Calculated for the exposed ground. |
| PSSD\_HV | Land cover | Real | Patch Size Standard Deviation. Calculated for the herbaceous vegetation. |
| PSSD\_SV | Land cover | Real | Patch Size Standard Deviation. Calculated for the shrub vegetation. |
| PSSD\_Wa | Land cover | Real | Patch Size Standard Deviation. Calculated for the water. |
| SHDI | Land cover | Real | SHDI stands for Simpson's Diversity Index. |
| SHEI | Land cover | Real | SHEI stands for Shannon's Evenness Index. |
| SIEI | Land cover | Real | SIEI stands for Simpson's Evenness Index |
| SN\_MAX | Slope | Real | Maximum value of the slope. |
| SN\_MEAN | Slope | Real | Average value of the slope. |
| SN\_MIN | Slope | Real | Minimum value of the slope. |
| SN\_RANGE | Slope | Real | Range value of the slope. |
| SN\_SUM | Slope | Real | Sum value of the slope. |
| SN\_VAR | Slope | Real | Variance value of the slope. |
| TABO\_EG | Land cover | Real | Total Area of the Biggest Object that intersects the landscape. Calculated for the exposed ground. |
| TABO\_HV | Land cover | Real | Total Area of the Biggest Object that intersects the landscape. Calculated for the herbaceous vegetation. |
| TABO\_SV | Land cover | Real | Total Area of the Biggest Object that intersects the landscape. Calculated for the shrub vegetation. |
| TABO\_Wa | Land cover | Real | Total Area of the Biggest Object that intersects the landscape. Calculated for the water. |
| TAOBIA\_EG | Land cover | Real | Total Area of the Object with Biggest Intersection Area. Calculated for the exposed ground. |
| TAOBIA\_HV | Land cover | Real | Total Area of the Object with Biggest Intersection Area. Calculated for the herbaceous vegetation. |
| TAOBIA\_SV | Land cover | Real | Total Area of the Object with Biggest Intersection Area. Calculated for the shrub vegetation. |
| TAOBIA\_Wa | Land cover | Real | Total Area of the Object with Biggest Intersection Area. Calculated for the water. |
| TE\_EG | Land cover | Real | Total edges. Calculated for the exposed ground. |
| TE\_HV | Land cover | Real | Total edges. Calculated for the herbaceous vegetation. |
| TE\_SV | Land cover | Real | Total edges. Calculated for the shrub vegetation. |
| TE\_Wa | Land cover | Real | Total edges. Calculated for the water. |
| VN\_MAX | Vertical curvature | Real | Maximum value of the vertical curvature. |
| VN\_MEAN | Vertical curvature | Real | Average value of the vertical curvature. |
| VN\_MIN | Vertical curvature | Real | Minimum value of the vertical curvature. |
| VN\_RANGE | Vertical curvature | Real | Range value of the vertical curvature. |
| VN\_SUM | Vertical curvature | Real | Sum value of the vertical curvature. |
| VN\_VAR | Vertical curvature | Real | Variance value of the vertical curvature. |
| Wa\_DIST | HAND | Real | Distance to the river. |
| Water | Land cover | Integer64 | Cell with presence of water. |