| **Variable name** | **Original data source** | **Scale** | **Original spatial unit of analysis** | **Final unit** | **Time periods covered** | **Periodicity** | **Processing notes** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Cell\_ID | N/A | 1 x 1 km | Polygon square grid | Same as previous | N/A | N/A | Three different grids were created for countries in South America, Africa, and Asia. Different projections were used when creating each grid corresponding to the region. South America was South America Albers Equal Area Conic, Africa was Africa Albers Equal Area Conic, and Asia was Asia South Albers Equal Area Conic. The grids are clipped to the GADM boundaries of each country. Wetlands were erased from the grid. |
| Area\_ha | N/A | 1000 x 1000 m | Each grid, despite being 1x1 km in size had sq meters as its default unit of measure (due to the local projections) | Total area in hectares | N/A | N/A | New field in the attribute table was created to convert area from square meters to hectares. |
| Forest\_ha | Hansen Tree Cover 2010 data | 30 x 30 m | Pixels | Total area in sq m | Tree cover as of 2010 | Single-year value | Calculations were made using GFW’s big data analysis tool geotrellis. A geodesic area raster was also applied to the raster, and only tree cover greater than 60% was considered. |
| Country\_code | GADM | N/A | Country polygons | GADM country code | N/A | N/A | Each grid cell was assigned a country code based on which country it spatially overlapped with (administrative level 0) |
| Country | GADM | N/A | Country polygons | Country name | N/A | N/A | Each grid cell was assigned a country name based on which it spatially overlapped with (administrative level 0) |
| State\_code | GADM | N/A | State polygons | State code | N/A | N/A | Each grid cell was assigned a state code based on which state it spatially overlapped with (administrative level 1) |
| With\_intent | GFW | N/A | Subscription area polygons | Number of subscriptions per month | 02/2016 - 08/2018 | Monthly | Some months didn’t have recorded subscriptions fitting this category: 08/2016-12/2016 & 09/2017-12/2017. |
| Without\_intent | GFW | N/A | Subscription area polygons | Number of subscriptions per month | 02/2016 - 08/2018 | Monthly | Some months didn’t have recorded subscriptions fitting this category: 02/2016, 09/2016-12/2016, & 09/2017-12/2017. |
| Deforestation | Hansen annual deforestation data | 30 x 30 m | Pixels | Total loss in grid cell in hectares | 2011-2018 | Annual | Calculations were made using GFW’s big data analysis tool geotrellis. A geodesic area raster was also applied. A forest mask was used to count loss only inside >60% 2010 tree canopy density. For each precise loss pixel, the geodesic area of that pixel was summed. |
| Precipitation | CHIRPS | 0.05° | Pixels | Total cumulative precipitation in mm | 2011 - 2018 | Annual | Projected the raster into UTM World Mercator to get meter values. Resampled the data so it was 100 x 100 m. |
| Temperature | TERRA (MODIS) | 0.1° | Pixels | Average temperature (Celsius) | 2011 - 2018 | Annual | Projected the raster into UTM World Mercator to get meter values. Resampled the data so it was 100 x 100 m. |
| ProtAreas\_Ia\_ha | IUCN | N/A | Strict Nature Reserve polygons | Total area (ha) within grid cell | N/A | N/A | Reprojected into local projection. Clipped to grid file to measure area in each grid. |
| ProtAreas\_Ib\_ha | IUCN | N/A | Wilderness Areas polygons | Total area (ha) within grid cell | N/A | N/A | Reprojected into local projection. Clipped to grid file to measure area in each grid. |
| ProtAreas\_II\_ha | IUCN | N/A | National Park polygons | Total area (ha) within grid cell | N/A | N/A | Reprojected into local projection. Clipped to grid file to measure area in each grid. |
| ProtAreas\_III\_ha | IUCN | N/A | National Monuments or Features polygons | Total area (ha) within grid cell | N/A | N/A | Reprojected into local projection. Clipped to grid file to measure area in each grid. |
| ProtAreas\_IV\_ha | IUCN | N/A | Habitat and Species Management Area polygons | Total area (ha) within grid cell | N/A | N/A | Reprojected into local projection. Clipped to grid file to measure area in each grid. |
| ProtAreas\_V\_ha | IUCN | N/A | Protected Landscapes and Seascapes polygons | Total area (ha) within grid cell | N/A | N/A | Reprojected into local projection. Clipped to grid file to measure area in each grid. |
| ProtAreas\_VI\_ha | IUCN | N/A | Protected Areas with Sustainable Use of Natural Resources polygons | Total area (ha) within grid cell | N/A | N/A | Reprojected into local projection. Clipped to grid file to measure area in each grid. |
| Biosphere\_ha | UNESCO-MAB | N/A | Biosphere polygons | Biosphere name | N/A | NA | Converted biosphere file to local projection. Clipped to grid file and measured area in each grid. |
| DistPort | World Port Index (National Geospatial-Intelligence Agency) | N/A | Port point shapefile | Distance (km) of grid cell centroid from nearest port | N/A | N/A | Only included ports from countries involved in analysis. Projected point file into local projection in order to get calculations in meters. Converted grid polygon into grid centroid points for distance calculations. Created distance raster to assign each grid cell a value. |
| DistUrbanCenter | JRC’s Global Human Settlement data | 250 x 250 m | Pixels | Distance (km) of grid cell centroid from nearest international border | N/A | N/A | Converted raster to polygon. Selected only cities above 100,000 people. Projected into local projections. Used cell centroid shapefile for distance calculations. |
| DistRoad | OpenStreetMap (via Geofabrik) | N/A | Road line shapefile | Distance (km) of grid cell centroid from nearest road | N/A | N/A | Maintained roads that crossed borders. Projected road shapefile into local projections. Used cell centroid shapefile. |
| WoodConc\_ha | GFW | N/A | Wood Fiber Concessions polygon | Hectares of concessions within grid cell | N/A | N/A | Dissolved to remove overlapping areas. Projected into local projections. Clipped to grid to measure overlap of cell with concession. |
| LoggingConc\_ha | GFW | N/A | Logging Concessions polygon | Hectares of concessions within grid cell | N/A | N/A | Dissolved to remove overlapping areas. Projected into local projections. Clipped to grid to measure overlap of cell with concession. |
| PalmOil\_ha | GFW | N/A | Palm Oil Concessions polygon | Hectares of concessions within grid cell | N/A | N/A | Dissolved to remove overlapping areas. Projected into local projections. Clipped to grid to measure overlap of cell with concession. |