Soil use and vegetation in San Pablo Tejalpa, Zumpahuacan, Mexico State, Mexico

María Eulalia García Morales[1], Rodrigo Bata Benitez[2], Mariusz Krzysztof Janczur Feret[1,2]

[1]*BioSer Laboratories, San Mateo Otzacatipan, Privada Josefa Ortíz de Domínguez sin Número, C.P. 50200 Toluca, Estado de México, México*

[2]*Research Group in Ecology and Evolutionary Biology, Department of Natural Sciences, Autonomous University of the State of Mexico, México, Carretera Toluca-Tlachaloya, km 18, Cerrillo Piedras Blancas, CP 50200 Toluca, Estado de México, México*

Information concerning the map of land use and vegetation (series VI) 2014-2017, INEGI

- Metadata

DESCRIPTION	usosueveg16.shp
AREA COUNT	142754
AREA VERTEX COUNT	21371129
LINE COUNT	0
POINT COUNT	0
MESH COUNT	0
UPPER LEFT X	-118.4060004590
UPPER LEFT Y	32.7187137948
LOWER RIGHT X	-86.7106863393
LOWER RIGHT Y	14.5323940345
WEST LONGITUDE	120° 48' 57.3440" W
NORTH LATITUDE	33° 30' 35.7897" N
EAST LONGITUDE	84° 26' 47.7681" W
SOUTH LATITUDE	13° 37' 34.8539" N
UL CORNER LONGITUDE	118° 24' 21.6017" W
UL CORNER LATITUDE	32° 43' 07.3697" N
UR CORNER LONGITUDE	86° 42' 38.4708" W
UR CORNER LATITUDE	32° 43' 07.3697" N
LR CORNER LONGITUDE	86° 42' 38.4708" W
LR CORNER LATITUDE	14° 31' 56.6185" N
LL CORNER LONGITUDE	118° 24' 21.6017" W
LL CORNER LATITUDE	14° 31' 56.6185" N
PROJ_DESC	Geographic (Latitude/Longitude) / WGS84 / arc degrees
PROJ_DATUM	WGS84
PROJ_UNITS	arc degrees
EPSG_CODE	EPSG:4326
COVERED AREA	6540676 sq km
CODE_PAGE	0 (Default (Current System Language))
LOAD TIME	18.89 s

Map coordinate reference system

- **Mexico ITRF2008 / UTM zone 14N**

- **Properties**

- Units: meters

- Static (relies on a datum which is plate-fixed)

- Celestial body: Earth

- Method: Universal Transverse Mercator (UTM)

- **WKT**

```
PROJCRS["Mexico ITRF2008 / UTM zone 14N",
    BASEGEOGCRS["Mexico ITRF2008",
        DATUM["Mexico ITRF2008",
            ELLIPSOID["GRS 1980",6378137,298.257222101,
                LENGTHUNIT["metre",1]]],
        PRIMEM["Greenwich",0,
            ANGLEUNIT["degree",0.0174532925199433]],
        ID["EPSG",6365]],
    CONVERSION["UTM zone 14N",
        METHOD["Transverse Mercator",
            ID["EPSG",9807]],
        PARAMETER["Latitude of natural origin",0,
            ANGLEUNIT["degree",0.0174532925199433],
            ID["EPSG",8801]],
        PARAMETER["Longitude of natural origin",-99,
            ANGLEUNIT["degree",0.0174532925199433],
            ID["EPSG",8802]],
        PARAMETER["Scale factor at natural origin",0.9996,
            SCALEUNIT["unity",1],
            ID["EPSG",8805]],
        PARAMETER["False easting",500000,
            LENGTHUNIT["metre",1],
            ID["EPSG",8806]],
        PARAMETER["False northing",0,
            LENGTHUNIT["metre",1],
            ID["EPSG",8807]]],
    CS[Cartesian,2],
        AXIS["(E)",east,
            ORDER[1],
            LENGTHUNIT["metre",1]],
        AXIS["(N)",north,
            ORDER[2],
            LENGTHUNIT["metre",1]],
    USAGE[
        SCOPE["Engineering survey, topographic mapping."],
        AREA["Mexico between 102°W and 96°W, onshore and offshore."],
        BBOX[12.3,-102,29.81,-96]],
    ID["EPSG",6369]]
```

- **Proj4**

- `+proj=utm +zone=14 +ellps=GRS80 +towgs84=0,0,0,0,0,0,0 +units=m +no_defs`

- **Extension**

- -102.00, 12.30, -96.00, 29.81

Survey point distribution in the park and in the remants of a tropical deciduous forest, San Pablo Tejalpa, Zummpahuacan, Mexico State, México

Scale: 1:5000

Survey points, park zone

Survey points, remants of tropical deciduous forest

Map of distribution of survay points in the land use and vegetation layer (Series VI), INEGI (2014-2017)

Scale: 1:45000

Annual irrigation agriculture

Annual and permanent irrigation agriculture

Annual rainfed agriculture

Oak forest

induced grassland

Urban built

Secondary shrub vegetation of the oak forest

Secondary shrub vegetation of the checkerbark juniper forest

Secondary shrub vegetation of the tropical deciduous forest

Secondary arboreal vegetation of the checkerbark juniper forest

Secondary shrub vegetation of oak-pine forest

Survey points in the park

Survay points in the tropical deciduous forest remant

Map of distribution of survey points in the land use and vegetation layer (Series VI), INEGI (2014-2017) and satellite map

Scale: 1:45000

Annual irrigation agriculture

Annual and permanent irrigation agriculture

Annual rainfed agriculture

Oak forest

induced grassland

Urban built

Secondary shrub vegetation of the oak forest

Secondary shrub vegetation of the checkerbark juniper forest

Secondary shrub vegetation of the tropical deciduous forest

Secondary arboreal vegetation of the checkerbark juniper forest

Secondary shrub vegetation of oak-pine forest

Survey points in the park

Survey points in the tropical deciduous forest remant

Study site description

- The study site is located on an area of annual and permanent irrigation agriculture (INEGI, 2014-2017)

- Both sets of survey points are in an area now with land use change, highly disturbed and modified from what was tropical deciduous forest (TDF).

- Red survey points are located on a relict stripe of disturbed vegetation ranging from 50 to 100 m wide, with larger TDF elements.

- This stripe constitutes an island and a relict of disturbed TDF vegetation that could represent a biological corridor and refuge area for species.

- Yellow points correspond to a highly disturbed and modified area of tropical deciduous forest, with a percentage of 80% clearing or logging with reports of other land use activities (park).