

Data Set Number 175: Land use in the Fakara in the year 1950

Identification_Information:

Citation:

Citation_Information:

Originator: ILRI

Publication_Date: Unpublished Material

Title: Land use in the Fakara in the year 1950

Geospatial_Data_Presentation_Form: vector digital data

Description:

Abstract: This GIS layer, given land use in 1950 is derived from 1:500000? historical aerial photographs to contribute to the spatial budgeting and modelling work accomplished by ILRI from 1994. Since 2000, land use has been updated and used by ICRISAT under a range of special research project (DGCD Decision Support, DMP, Agrhymet Climate Change)

Purpose: Production of continuous coverage from discontinuous aerial coverage to produce clear readable maps of different spatial scales necessary for unit-referenced data collection to act as a base map for multitemporal overlaying of historical (1950, 1965, 1975) and recent (1994, 1995, 1996, 2002, 2004) land use cover

Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 1950

Currentness_Reference: ground condition

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None planned

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: 2.567137

East_Bounding_Coordinate: 2.883726

North_Bounding_Coordinate: 13.589355

South_Bounding_Coordinate: 13.332611

Keywords:

Theme:

Theme_Keyword_Thesaurus: none

Theme_Keyword: Land use

Place:

Place_Keyword_Thesaurus: none

Place_Keyword: Fakara

Place_Keyword: Niger

Place_Keyword: West Africa

Place_Keyword: Sahel

Temporal:

Temporal_Keyword_Thesaurus: none

Temporal_Keyword: 1950

Access_Constraints: Request to be made to ILRI

Use_Constraints: Cite when used

Data_Set_Credit: Pierre Hiernaux and Matthieu Turner

Security_Information:

Security_Classification: Restricted

Security_Handling_Description: Can only be used with specific authorization of ILRI

Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 9.2.0.1324

Cross_Reference:

Citation_Information:

Geospatial_Data_Presentation_Form: document

Data_Quality_Information:

Lineage:

Process_Step:

Process_Description:

1) Photos interpretations was performed stereoscopically by Pierre Hiernaux. To facilitate the completion of the work, alternating photos were used in the interpretation, rather than using the central portion of each photo, usually done to reduce parallax-related distortion.

2) Ground-control Points

In order to geometrically correct individual map files prior to merging, GPS readings were taken in at least ten locations within the area covered by each aerial photo (exception being photo 273 where ground-control points were not taken). Points were at locations identifiable on the aerial photo interpretations as well as on the ground. These points most commonly were at intersections of line features of the aerial interpretations including paths, livestock paths, field boundary hedges, wadis but also at well-defined point features such as isolated trees, and wells. Every attempt was made for points to be as evenly distributed across the photo area as possible. At least 150 GPS readings were taken at each point using a Trimble Pathfinder Basic Plus GPS Receiver. GPS data for ground-control points were collected on the following dates: 21/3/94, 24/3/94, 05/4/94, 29/7/94, 5/8/94, 16/8/94, 17/8/94, 5/9/94, 13/9/94, 27/9/94, and 28/9/94.

3) Each acetate overleaf was digitized using ATLAS-GIS for DOS software with the assistance of Moussa Mahamane and Aboubacar Maman. The land-use interpretations were digitized into separate files with the feature types of each assigned to separate layers. The land-use files were merged together using the above-mentioned corner points as common reference points.

4) In 2000 Atlas GIS layer was converted to ESRI shape file in ArcView 3 by Bruno Gerard

5) In 2006, proper projection was added to the shape file using 'define projection' in the ArcToolbox (ArcMap 9.1)

Source_Used_Citation_Abbreviation:

Process_Date: Unknown

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: G-polygon

Point_and_Vector_Object_Count: 1005

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Planar:

Grid_Coordinate_System:

Grid_Coordinate_System_Name: Universal Transverse Mercator

Universal_Transverse_Mercator:

UTM_Zone_Number: 31

Transverse_Mercator:

Scale_Factor_at_Central_Meridian: 0.999600

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Longitude_of_Central_Meridian: 3.000000
Latitude_of_Projection_Origin: 0.000000
False_Easting: 500000.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
  Planar_Coordinate_Encoding_Method: coordinate pair
  Coordinate_Representation:
    Abscissa_Resolution: 0.000000
    Ordinate_Resolution: 0.000000
    Planar_Distance_Units: meters
Geodetic_Model:
  Horizontal_Datum_Name: D_WGS_1984
  Ellipsoid_Name: WGS_1984
  Semi-major_Axis: 6378137.000000
  Denominator_of_Flattening_Ratio: 298.257224
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: lu50
      Entity_Type_Definition: Land use in 1950
    Attribute:
      Attribute_Label: FID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that
are automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:
      Attribute_Label: ID_
      Attribute_Definition: Identification code
      Attribute_Definition_Source: Atlas GIS
    Attribute:
      Attribute_Label: LANDUSE
      Attribute_Definition: Land use
      Attribute_Definition_Source: Photointerpretation by P. Hiernaux
      Attribute_Domain_Values:
        Enumerated_Domain:
          Enumerated_Domain_Value: b
          Enumerated_Domain_Value_Definition: No trace of prior
cultivation
          Enumerated_Domain_Value_Definition_Source: Pierre Hiernaux
        Enumerated_Domain:
          Enumerated_Domain_Value: c
          Enumerated_Domain_Value_Definition: cropped
          Enumerated_Domain_Value_Definition_Source: Pierre Hiernaux
        Enumerated_Domain:
          Enumerated_Domain_Value: f
          Enumerated_Domain_Value_Definition: Uncultivated (Friche)
          Enumerated_Domain_Value_Definition_Source: Pierre Hiernaux
        Enumerated_Domain:
          Enumerated_Domain_Value: j

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Enumerated_Domain_Value_Definition: Fallow (jachere)
 Enumerated_Domain_Value_Definition_Source: Pierre Hiernaux
 Enumerated_Domain:
 Enumerated_Domain_Value: s
 Enumerated_Domain_Value_Definition: Laterite plateau
 Enumerated_Domain_Value_Definition_Source: Pierre Hiernaux
 Enumerated_Domain:
 Enumerated_Domain_Value: w
 Enumerated_Domain_Value_Definition: Village
 Enumerated_Domain_Value_Definition_Source: Pierre Hiernaux
 Distribution_Information:
 Distributor:
 Contact_Information:
 Contact_Organization_Primary:
 Contact_Organization: ILRI - ICRISAT
 Contact_Address:
 Address_Type: mailing and physical address
 Address: BP: 12404
 City: Niamey
 Country: Niger
 Contact_Voice_Telephone: +22720722626
 Contact_Facsimile_Telephone: +22720734329
 Contact_Electronic_Mail_Address: icrisatsc@cgiar.org
 Resource_Description: Land use in the Fakara in the year 1950
 Distribution_Liability:
 Standard_Order_Process:
 Digital_Form:
 Digital_Transfer_Information:
 Transfer_Size: 1.251
 Metadata_Reference_Information:
 Metadata_Contact:
 Contact_Information:
 Contact_Organization_Primary:
 Contact_Organization: ICRISAT
 Contact_Person: AMADOU M.Laouali
 Contact_Address:
 Address_Type: mailing and physical address
 Address: BP: 12404
 City: Niger
 State_or_Province:
 Postal_Code:
 Country: Niger
 Contact_Voice_Telephone: +22720722626
 Contact_Voice_Telephone: +22720722529
 Contact_Facsimile_Telephone: +22720734329
 Contact_Electronic_Mail_Address: a.m.laouali@cgiar.org
 Contact_Instructions: Prefer mailing contact
 Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial
 Metadata
 Metadata_Standard_Version: FGDC-STD-001-1998
 Metadata_Time_Convention: local time
 Metadata_Extensions:
 Online_Linkage: <http://www.esri.com/metadata/esriprof80.html>
 Profile_Name: ESRI Metadata Profile