

## ***Data Set Number 181: Land use in the Fakara in the year 1996***

### Identification\_Information:

#### Citation:

##### Citation\_Information:

Originator: ILRI

Publication\_Date: Unpublished Material

Title: Land use in the Fakara in the year 1996

Geospatial\_Data\_Presentation\_Form: vector digital data

#### Description:

Abstract: This GIS layer, given land use in 1996 is derived from digital photo mosaïque (ILRI photographic mission) 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: 1996

Currentness\_Reference: ground condition

#### Status:

Progress: Complete

Maintenance\_and\_Update\_Frequency: None planned

#### Spatial\_Domain:

##### Bounding\_Coordinates:

West\_Bounding\_Coordinate: 2.563927

East\_Bounding\_Coordinate: 2.887283

North\_Bounding\_Coordinate: 13.592817

South\_Bounding\_Coordinate: 13.337918

#### 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: 1996

Access\_Constraints: Request to be made to ILRI

Use\_Constraints: Cite when used

Data\_Set\_Credit: Pierre Hiernaux, Bruno Gerard 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)

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: 9812

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

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: LU96  
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: OS96  
Attribute\_Definition: Land use in 1996  
Attribute\_Definition\_Source: Pierre Hiernaux and Bruno Gerard  
Attribute\_Domain\_Values:  
Enumerated\_Domain:  
Enumerated\_Domain\_Value: c  
Enumerated\_Domain\_Value\_Definition: cropped  
Enumerated\_Domain\_Value\_Definition\_Source: Pierre Hiernaux  
and Bruno Gerard  
Enumerated\_Domain:  
Enumerated\_Domain\_Value: cv  
Enumerated\_Domain\_Value\_Definition: Manure field  
Enumerated\_Domain\_Value\_Definition\_Source: Pierre Hiernaux  
and Bruno Gerard  
Enumerated\_Domain:  
Enumerated\_Domain\_Value: f  
Enumerated\_Domain\_Value\_Definition: Friche (uncropped land)  
Enumerated\_Domain\_Value\_Definition\_Source: Pierre Hiernaux  
and Bruno Gerard  
Enumerated\_Domain:  
Enumerated\_Domain\_Value: j  
Enumerated\_Domain\_Value\_Definition: Fallow field  
Enumerated\_Domain\_Value\_Definition\_Source: Pierre Hiernaux  
and Bruno Gerard

Enumerated\_Domain:  
   Enumerated\_Domain\_Value: s  
   Enumerated\_Domain\_Value\_Definition: plateau  
   Enumerated\_Domain\_Value\_Definition\_Source: Pierre Hiernaux  
 and Bruno Gerard  
   Enumerated\_Domain:  
     Enumerated\_Domain\_Value: vl  
     Enumerated\_Domain\_Value\_Definition: village  
     Enumerated\_Domain\_Value\_Definition\_Source: Pierre Hiernaux  
 and Bruno Gerard  
 Distribution\_Information:  
   Distributor:  
     Contact\_Information:  
       Contact\_Organization\_Primary:  
         Contact\_Organization: ICRISAT - ILRI  
       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  
         Hours\_of\_Service: 8h00-16h00 pm z+1  
         Contact\_Instructions: Prefer mailing contact  
     Resource\_Description: Land use in Fakara in the year 1996  
     Standard\_Order\_Process:  
       Digital\_Form:  
         Digital\_Transfer\_Information:  
           Transfer\_Size: 1.251  
     Metadata\_Reference\_Information:  
       Metadata\_Contact:  
         Contact\_Information:  
           Contact\_Organization\_Primary:  
             Contact\_Organization: ICRISATSC  
             Contact\_Person: AMADOU M.Laouali  
           Contact\_Address:  
             Address\_Type: mailing and physical address  
             Address: BP: 12404  
             City: Niamey  
             Country: Niger  
             Contact\_Voice\_Telephone: +22720722626  
             Contact\_Facsimile\_Telephone: +22720734329  
             Hours\_of\_Service: 8h00-16h00 pm z+1  
             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