

**Data Set Number 201: Pan-sharpened false color IR Landsat 7 image for Path192 Row 051 taken on 09 November 1999**

Identification\_Information:

Citation:

Citation\_Information:

Originator: U.S. Geological Survey

Publication\_Date: 1999

Title: Pan-sharpened false color IR Landsat 7 image for Path192 Row 051 taken on 09 November 1999

Geospatial\_Data\_Presentation\_Form: remote-sensing image

Online\_Linkage: \\ENGE-FROUFROU\LACIE

(F)\metadata\_fakara\landsat\1999\p192r051\_7p19991109\_z31\_fcir\_psA.tif

Description:

Abstract: This data set is a pan-sharpened false colour IR image of Landsat 7 ETM-EarthSat Orthorectified scene taken over the Niamey-Fakara region

Purpose: Enhance multispectral resolution using panchromatic scene (15 meter resolution)

Time\_Period\_of\_Content:

Time\_Period\_Information:

Single\_Date/Time:

Calendar\_Date: 19991109

Currentness\_Reference: ground condition

Status:

Progress: Complete

Maintenance\_and\_Update\_Frequency: None planned

Spatial\_Domain:

Bounding\_Coordinates:

West\_Bounding\_Coordinate: 1.938093

East\_Bounding\_Coordinate: 4.229655

North\_Bounding\_Coordinate: 13.992028

South\_Bounding\_Coordinate: 12.038444

Keywords:

Theme:

Theme\_Keyword\_Thesaurus: GCMD

Theme\_Keyword: EARTH SCIENCE > RADIANCE OR IMAGERY > Infrared Wavelengths > Infrared Imagery

Theme\_Keyword: EARTH SCIENCE > RADIANCE OR IMAGERY > Visible Wavelengths > Visible Imagery

Theme\_Keyword: EARTH SCIENCE > LAND SURFACE > Surface Radiative Properties > Reflectance

Theme\_Keyword: EARTH SCIENCE > LAND SURFACE > Land Use/Land Cover > Land Classes

Theme\_Keyword: EARTH SCIENCE > LAND SURFACE > Landscape > Landscape Pattern

Theme\_Keyword: Pan-sharpen

Place:

Place\_Keyword\_Thesaurus: none

Place\_Keyword: Niamey

Place\_Keyword: Fakara

Place\_Keyword: Niger

Place\_Keyword: Sahel

Place\_Keyword: West Africa

Temporal:

Temporal\_Keyword\_Thesaurus: none

Temporal\_Keyword: 1999  
Access\_Constraints: None  
Use\_Constraints: Cite: NASA Landsat Program, 2003, Landsat ETM+ scene L71008058\_05820031026, SLC-Off, USGS, Sioux Falls, 10/26/2003 + pan-sharpening by B.Gerard  
Point\_of\_Contact:  
Contact\_Information:  
Contact\_Organization\_Primary:  
Contact\_Organization: Catholic University of Louvain  
Contact\_Person: BRUNO GERARD  
Contact\_Position: Visitor Scientist  
Contact\_Address:  
Address\_Type: mailing and physical  
Address: Faculty of Biological, Agronomic and Environmental Engineering  
Catholic university of Louvain  
Croix du Sud, 2 bte 16  
B-1348 Louvain-la-Neuve (Belgium)  
Fax 32 (0) 10 47 88 98  
  
City: Louvain-la-Neuve  
Country: Belgique  
Contact\_Voice\_Telephone: 32 (0) 10 47 92 57  
Contact\_Electronic\_Mail\_Address: b.Gerard@cgiar.org  
Contact\_Electronic\_Mail\_Address: gerard@enge.ucl.ac.be  
Data\_Set\_Credit: The Landsat Program, as defined by Congress in 1992 and amended by Presidential Decision Directive/NSTC-3 in May 1994, is managed cooperatively by the National Aeronautics and Space Administration (NASA), and the USGS. Responsibility for construction of the spacecraft and instrument lies with NASA. The Landsat Program is part of NASA's Earth Observing System global change initiative administered by NASA's Earth Science Enterprise. Data processing, archiving, and distribution are performed by the USGS. The primary ground station, the data handling facility and archive are located at the USGS EROS Data Center in Sioux Falls, SD. NASA will manage flight operations from the control center at the Goddard Space Flight Center until October 1, 2000, when responsibility for flight operations transfers to the USGS. The ground system will be able to distribute raw ETM+ data within 24 hours of its reception at the EROS Data Center. These functions are executed in coordination with the EDC Distributed Active Archive Center (EDC DAAC) of NASA's Earth Observing System Data and Information System.  
Security\_Information:  
Security\_Classification\_System: none  
Security\_Classification: Unclassified  
Security\_Handling\_Description: none  
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:  
Originator: U.S. Geological Survey  
Title: Landsat Thematic Mapper Imagery (Landsat TM)  
Online\_Linkage: <http://earthexplorer.cr.usgs.gov/>  
Data\_Quality\_Information:  
Lineage:  
Process\_Step:  
Process\_Description:

Pan-sharpening using HSV algorithm and nearest-neighbour resampling

The HSV sharpening transforms an RGB image to HSV color space, replace the value band with the high-resolution image, automatically resample the hue and saturation bands to the high-resolution pixel size using a nearest neighbor, bilinear, or cubic convolution technique, and finally transform the image back to RGB color space. The output RGB images have the pixel size of the input high-resolution data.

Process\_Contact:  
  Contact\_Information:  
    Contact\_Person\_Primary:  
      Contact\_Person: Bruno Gerard  
      Contact\_Organization: ICRISAT  
Spatial\_Data\_Organization\_Information:  
  Direct\_Spatial\_Reference\_Method: Raster  
  Raster\_Object\_Information:  
    Raster\_Object\_Type: Pixel  
    Row\_Count: 15140  
    Column\_Count: 17368  
    Vertical\_Count: 1  
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: row and column  
          Coordinate\_Representation:  
            Abscissa\_Resolution: 14.250000  
            Ordinate\_Resolution: 14.250000  
          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  
    Distribution\_Information:  
      Distributor:  
        Contact\_Information:  
          Contact\_Person\_Primary:  
            Contact\_Organization: U.S. Geological Survey  
          Contact\_Address:  
            Address\_Type: mailing and physical address  
            Address: Service, EROS, 800-252-4547  
          Contact\_Electronic\_Mail\_Address: custserv@usgs.gov  
          Contact\_Instructions:  
            Resource\_Description: Pan-sharpened false color IR Landsat 7 image  
            for Path192 Row 051 taken on 09 November 1999  
          Distribution\_Liability:

Standard\_Order\_Process:  
  Digital\_Form:  
    Digital\_Transfer\_Information:  
      Transfer\_Size: 0.000  
Metadata\_Reference\_Information:  
  Metadata\_Date: 20070206  
  Metadata\_Contact:  
    Contact\_Information:  
      Contact\_Organization\_Primary:  
        Contact\_Organization: ICRISAT  
        Contact\_Person: AMADOU M.Laouali  
      Contact\_Address:  
        Address\_Type: mailing and physical address  
        City: Niamey  
        State\_or\_Province:  
        Postal\_Code:  
        Country: Niamey  
        Contact\_Voice\_Telephone: +22720722626  
        Contact\_Facsimile\_Telephone: +22720734329  
        Contact\_Electronic\_Mail\_Address: icrisatsc@cgiar.org  
        Contact\_Instructions: <http://www.icrisat.org>  
  Metadata\_Standard\_Name: FGDC Content Standards for Digital Geospatial  
Metadata  
  Metadata\_Standard\_Version: FGDC-STD-001-1998  
  Metadata\_Time\_Convention: local time  
  Metadata\_Security\_Information:  
    Metadata\_Security\_Classification: Unclassified  
  Metadata\_Extensions:  
    Online\_Linkage: <http://www.esri.com/metadata/esriprof80.html>  
    Profile\_Name: ESRI Metadata Profile