

**Cordillera Azul National Park**  
In May 2001, the government of Peru established a 13,530 km<sup>2</sup> stretch of largely untouched forest as Cordillera Azul National Park, the second largest park in Peru. The park was created primarily through the efforts of the Peruvian Association for the Conservation of Nature (APECO), in conjunction with scientific and technical assistance from The Field Museum of Natural History. A new organization, el Centro de Conservación, Investigación y Manejo de Áreas Naturales (CIMA), is now responsible for park management. Cordillera Azul National Park lies between the Ucayali and Huallaga River valleys in northern Peru. Elevations in the park range from 200 meters (m) to more than 2,000 m above sea level. The eastern edge of the Cordillera Azul range rises abruptly from the Amazon Plain to more than 1.6 kilometers (km) in elevation. This escarpment forms most of the eastern border of the park. The dramatic topography and relative isolation from human activities combine to form an area that is rich in biodiversity.

In recent years, both before and since the park's creation, there have been substantial increases in human population in the Huallaga and Ucayali River valleys. This growth has been accompanied by increased land clearing for settlements, food crops, cocoa production, and timber harvest. To date, most of this conversion has occurred in the buffer zone around the park, not within its borders. However, understanding spatial and temporal patterns of land clearing remain critical for effective park management.

These maps show the results of an analytical process used to detect clearings as seen on Landsat imagery. Clearings are defined as bare ground likely related to human activity. This definition excludes landslides, sandbars, and mountaintops naturally free of vegetation. The definition includes roads, croplands, towns, and other settlements.

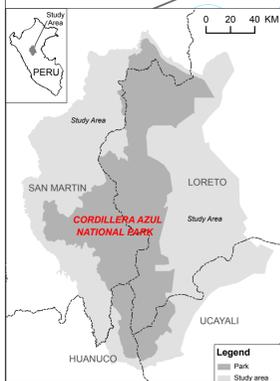
**Digital Elevation Model**  
The elevation data used in this map was created using National Geospatial-Intelligence Agency (NGA) 1:500,000 topographic maps in digital format. Twelve individual maps were needed to cover the entire study area. Contour interval varied by map. Areas in white are locations of "no data" in the digital NGA maps.

**Disturbance Mapping**  
Forest disturbances in and adjacent to Cordillera Azul National Park were mapped using remotely sensed imagery for 1996, 1999, 2000, 2001, and 2002. Both Landsat Thematic Mapper (TM) and Enhanced Thematic Mapper Plus (ETM+) data were used to map forest disturbances at a spatial resolution of 30 meters.

**Disturbance Statistics**

Year	cleared cells	uncleared cells	visible cells	% of area cleared	% of study area visible
1989	456,773	30,393,761	30,850,534	1.48%	73.3%
1996	474,848	31,137,675	31,612,523	1.50%	75.1%
1999	487,863	31,496,528	31,984,391	1.53%	76.0%
2000	589,369	28,172,378	28,761,747	2.05%	68.3%
2001	800,036	30,793,865	31,593,901	2.53%	75.0%
2002	797,712	26,527,487	27,325,199	2.92%	64.9%

Number of cells in study area: 42,101,612



**EXPLANATION**

- Disturbance
- Settlement/Town
- Air strip
- Park boundary
- Department boundary
- River
- Major road
- Minor road
- Unimproved road/trail

Universal Transverse Mercator projection, Zone 18 south  
Elevation and hillshade image map derived from National Geospatial-Intelligence Agency (NGA) 1:500,000 scale map contours  
Sun illumination from the northwest (315°) at 35° above horizon  
Disturbance data derived from Landsat Thematic Mapper imagery at 30-m resolution  
All vector data provided by the Center for Conservation, Investigation, and Management of Natural Areas, Lima, Peru (CIMA)

SCALE 1:380,000  
MILES  
KILOMETERS  
WORLD GEODETTIC SURVEY OF 1984

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This map was printed on an electronic plotter directly from digital files. Dimensional calibration may vary between electronic plotters and between X and Y directions on the same plotter, and paper may change size due to atmospheric conditions; therefore, scale and proportions may not be true on plots of this map.  
Available on the World Wide Web at <http://pubs.usgs.gov/sim/2005/2879/>  
Digital database and Internet Map Service available at <http://mapproline.wr.usgs.gov/peru>

**2002 Disturbances - Cordillera Azul National Park, Peru**  
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