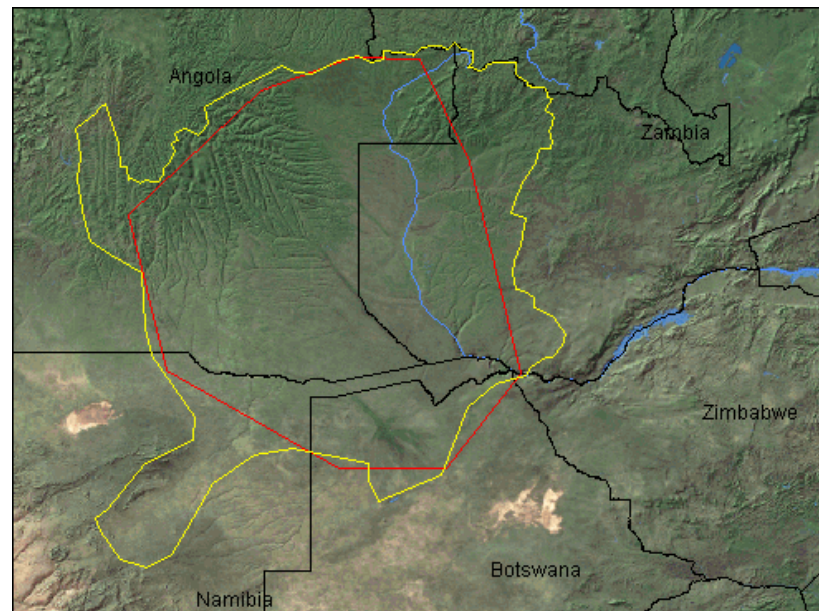


# Dartmouth Flood Observatory

## Flood Analysis Report 2003-047

Event:	DFO-2003-047, Zambezi River	Previous Events:	DFO-1998-027; previous rainy seasons
Duration:	Jan 15- May 16, 2003, 122 days	News Notes:	Worst floods in eastern Caprivi in 21 years (May 8) Normal seasonal flooding of the Upper Zambezi starts in January.
Cause:	Rainy season	Locations:	From DFO remote sensing: Upper Zambezi River and Cuando and Okavango Rivers. Mongu area. Caprivi Strip area of Namibia
Region Affected:	607,300 sq. km	Watershed:	826,200 sq. km;
Severity:	2 (in Caprivi)	GIS vectors:	See next page
Magnitude:	74.9		

*Figure 1. Location of contributing watershed (yellow line) and area affected by flooding (red line)*



Causation categories are: 1, thunderstorm; 2, precipitation band; 3, squall line; 4, stationary front; 5, mesoscale convective complex; 6, convective cloud cluster; 7, tropical cyclone; 8, extra-tropical cyclone; 9, stationary synoptic front; 10, ITCZ wave disturbance; 11, snowmelt; 12, rain and snowmelt; 13, ice jam or ice break-up; 14, dam break; 15, avalanche.

Severity classes: 1, large, 20%-5% exceedance probability – and/or significant damage to structures or agriculture; 2, very large, 5%-1%; 3, extreme, <1%.

Flood Magnitude: {Natural Log duration (days)} x {severity class} x {sq rt region affected (sq. km)} x .01.

Duration, region affected, and intensity are estimates from news and government reports.

Work supported by: the NASA Office of Earth Science and by the Dartmouth College Geography Department, Hanover NH 03755 USA

Citation for this publication: Anderson, E. and Brakenridge, G.R., 2003, Dartmouth Flood Observatory Flood Analysis Report 2003-047, p1-3, online at <http://www.dartmouth.edu/~floods/2003047.pdf>

# Dartmouth Flood Observatory Flood Analysis Report 2003-047

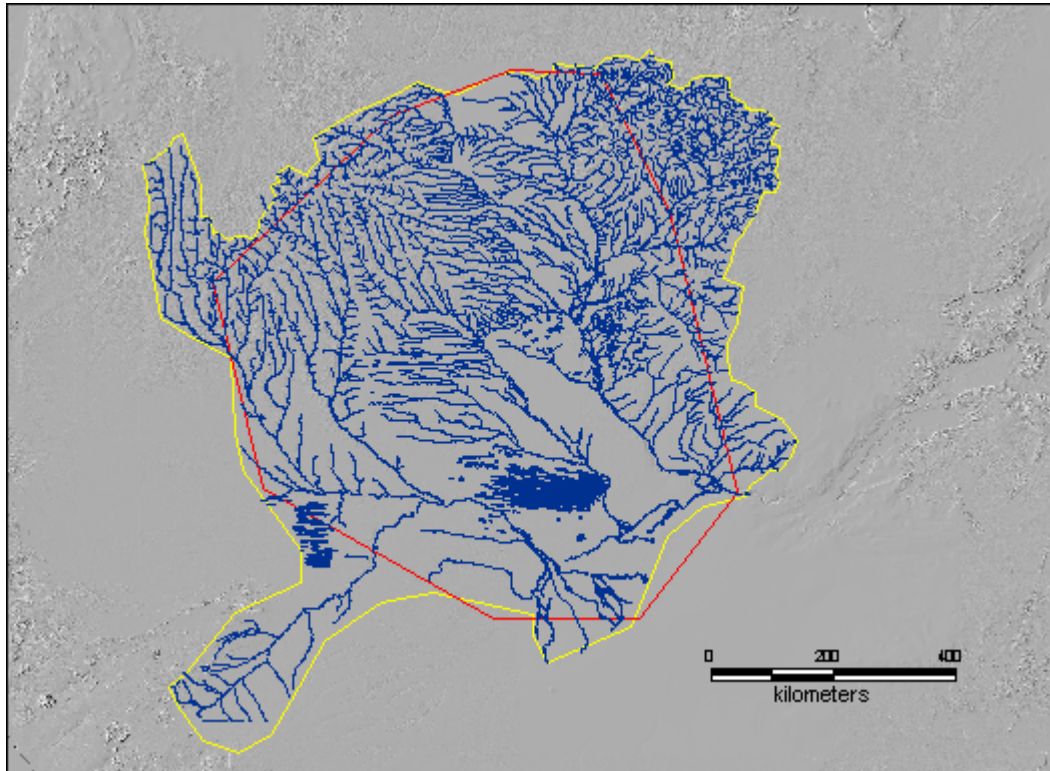



Figure 2. Flood-generating watershed for this flood event.














## List of MODIS GIS Vectors:

20031340840Caprivi047M2.41  
20031250845MonguCaprivi047M2.40;  
20031191205ZamCaprivi047Ma2.46;  
20031191210UZam047Ma2.47;  
20031180840ZamCaprivi047M2.38;  
20031160850UZamb047M2.45;  
20031121200ZamCaprivi047Ma2.44  
20030860840Zambezi047M2.49  
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
# DFO event # 2003-047

Area affected 

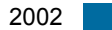
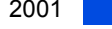
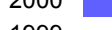
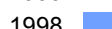

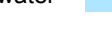
MODIS flood inundation limit

- June 18, 2003 
- May 24, 2003 
- May 23, 2003 
- May 14, 2003 
- May 5, 2003 
- April 29, 2003 
- April 28, 2003 
- April 26, 2003 
- April 22, 2003 
- March 27, 2003 
- March 18, 2003 
- March 7, 2003 
- March 3, 2003 

MODIS data cloud free area

June 18, 2003 

Flooded Lands in:

- 2003 
- 2002 
- 2001 
- 2000 
- 1999 
- 1998 

MODIS reference water 

Main city 

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Elaine Anderson  
Sébastien Caquard  
Work supported by  
NASA grant NAG5-9470

Lat/Long WGS 84  
Graticule: 2 degrees

