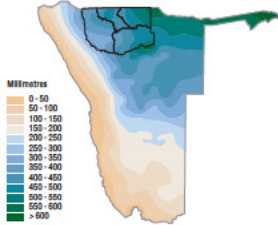


Rainfall of the Cuvelai-Etoshia Basin

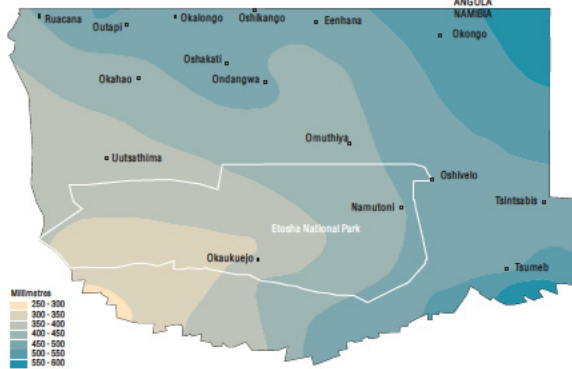
Amounts of rainfall per year

As in Namibia as a whole, rainfall declines rather evenly from east to west across the Basin. This is due to moist air being pushed into the country from the north and north-east during the rainy season.

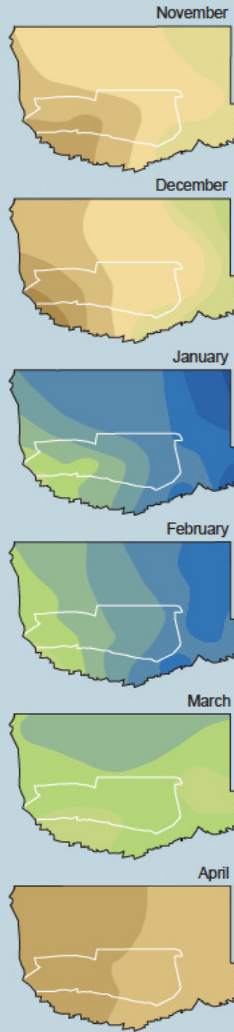
As a result, the south-western parts of the Basin receive an average of only around 300 millimetres per year while the north-eastern areas receive about 600 millimetres. Hilly areas in the south-east near Tsumeb get more rain because moist air is forced up over the hills where the moisture cools and condenses to produce rain.



Annual average rainfall (millimetres per year)



Timing of rainfall



Both the timing and amount of rain vary greatly from year to year and have significant effects on farming.

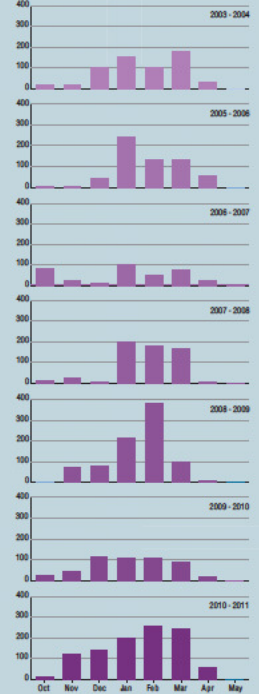
For example, the highest total over the past seven seasons in Ondangwa was in the 2010/2011 season when 1,027 millimetres fell. Only 372 millimetres, or close to three times less fell four years earlier at Ondangwa.

In some years most rain falls in January and February while in others it may be spread more evenly between December and March, or occur mainly in the earlier or later months of the season.

The timing strongly influences the planting, growth and harvesting of crops. The risk of crop failure is greatest in the west which usually has fewer days of productive rainfall days than the east.



Monthly rainfall at Ondangwa (millimetres per month)

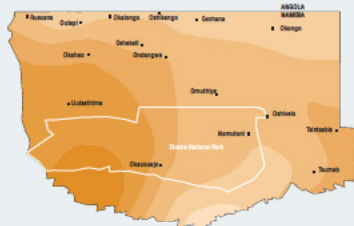


The rainy period usually lasts from November to April, but over two-thirds of all rain occurs in January, February and March.

For any year, the rainfall season is defined as July to June, thus the 2009 data include all rainfall between July 2009 and June 2010.

Productive rain (average number of days with rainfall of 10 millimetres or more per season)

Variation in rainfall



The co-efficient of variation provides a measure of how variable rainfall is. High values indicate greater levels of variation and unpredictability between seasons.

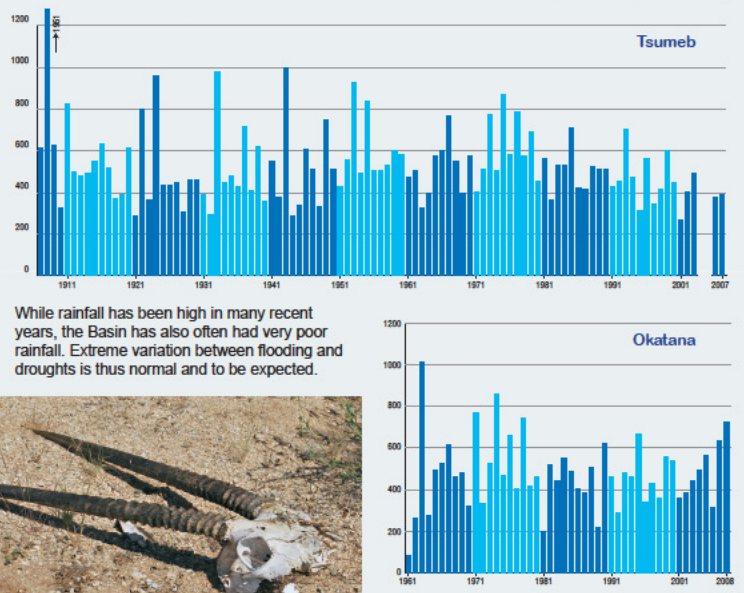
Comparing this map with the map of total rainfall shows that the western parts of the Basin not only receive less rainfall than eastern areas but rain is also less reliable in the west.

These graphs illustrate the high degree of variability in rainfall between seasons, those with high rainfall very often being followed by poor rain, and vice versa.

The charts also show cycles of drier and wetter periods. For example, rainfall increased during the 1970s and dropped again in the 1980s and 1990s.

The records over the past 100 years for Tsumeb also suggest that variation in rainfall between seasons was more extreme up to the 1950s than over the past 50 years.

Rainfall (millimetres per season)



While rainfall has been high in many recent years, the Basin has also often had very poor rainfall. Extreme variation between flooding and droughts is thus normal and to be expected.



This series of 10 posters about the Cuvelai-Etoshia Basin was compiled in 2011 by RAISON.

- 1 The Cuvelai-Etoshia Basin
- 2 Overview
- 3 People
- 4 Climate
- 5 Rainfall
- 6 Groundwater
- 7 Surface Water
- 8 Landscapes
- 9 Vegetation
- 10 Wildlife and Tourism

Photos:
Storm cloud - Tony Robertson
People - Heide Denker
Gemsbok skull - Alice Jarvis

