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 Twyvelfontein get more rain because moist air is forced up over the hills where the moisture cools and condenses to produce rain.

Monthly average rainfall (millimetres per month)

March
April
May
June
July
August
September
October
November
December

Timing of rainfall
Both the timing and amount of rainfall 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 less, fell in the previous years.

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.

Variation in rainfall
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 1990s.

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

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.