Image credit: NASA

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The Atlas Mountains - Natures Water Bandits

The winds that blow into Africa from the Atlantic Ocean are full of evaporated moisture. So why is the Sahara desert so dry?

No single phenomenon has yet been credited with the region's dramatic, 10,000 year transition from lush savanna to arid wasteland, but several factors are thought to have contributed to the process. Reasons for the Sahara's perennial water shortage may include a semi-permanent high pressure system over northern Africa introduced by the precession of Earth's axis of rotation, overgrazing by domesticated animals, and the phenomenon pictured here.

This image shows the process of orographic lifting. As the moist Atlantic winds encounter the Atlas Mountains near the Strait of Gibraltar, the air is forced up the mountain slope. As the air cools with altitude, its dew point is reached – clouds form, and heavy rains develop. By the time the air mass makes it all the way up and over to the opposite side of the mountain range, most of its moisture has been squeezed out.