

**1. Global climate zones.**

**Climate zones**  
 Example: C<sub>3</sub>sh is a maritime, semi-humid, warm temperate climate

57° VDL 12 hrs.  
 57° VDL 12 hrs. (Thermally adapted climatic boundary with influences of mountains and sea currents taken into account)

Degree of continentality (C in percent) as measure of the annual temperature variations

Humid months: precipitation > evaporation from the landscape

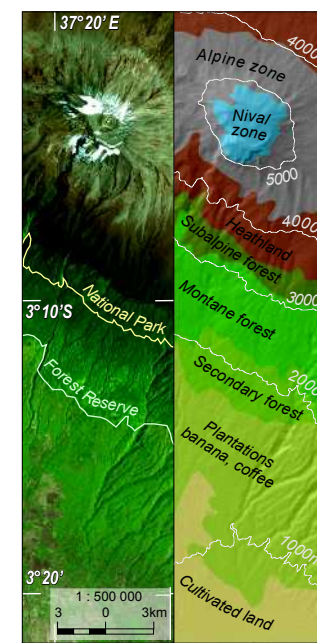
Region of subtropical winter rain

Coastal fogs (winter/summer)

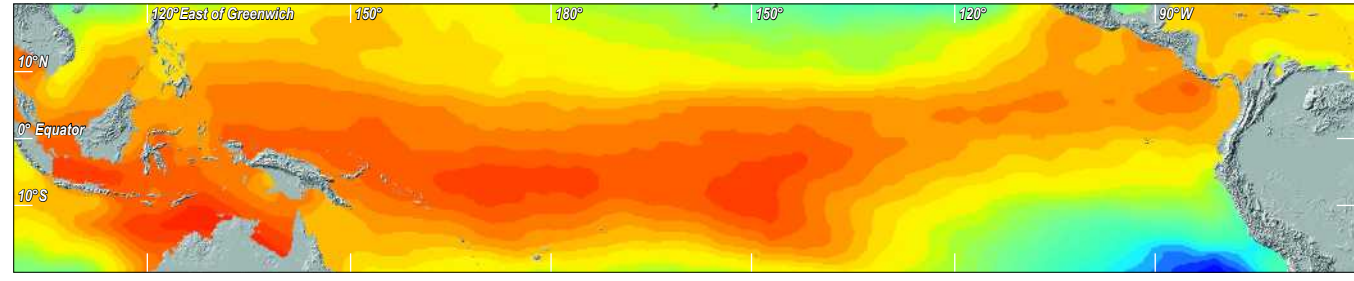
The classification of climatic zones is based on a model created by W. Lauer and P. Frankenberg in 1985. The criteria for classification refer to the real vegetation. The basic principle of climate grading is the inclusion of solar-climatic conditions of radiation and illumination. The borderline of the tropics is defined by the fluctuation of temperature. The border is located where the variation between summer and winter (annual amplitude) is larger than the variation between day and night (diurnal amplitude). Tropical climates are consequently diurnal climates, whereas non tropical climates are annual climates. According to that climatic classification, the earth can be divided roughly into 4 climatic zones, defined by the sun radiation. These zones are subclassified based on their thermal properties.

**Ocean currents**

- Cold main current
- Cold current
- Warm main current
- Warm current



4. Mountain climate, Kilimanjaro.

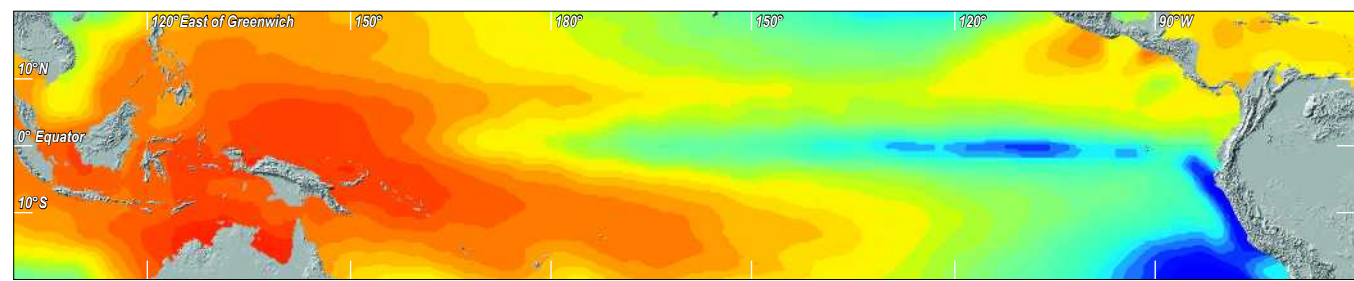


2. Sea surface temperatures.  
 2a. El Niño conditions in December 1997.  
 2b. La Niña conditions in December 1998.

Monthly average temperatures in °C Data: NOAA

18 20 22 24 26 28 30 32

Scale on Equator 1 000 2 000 3 000km

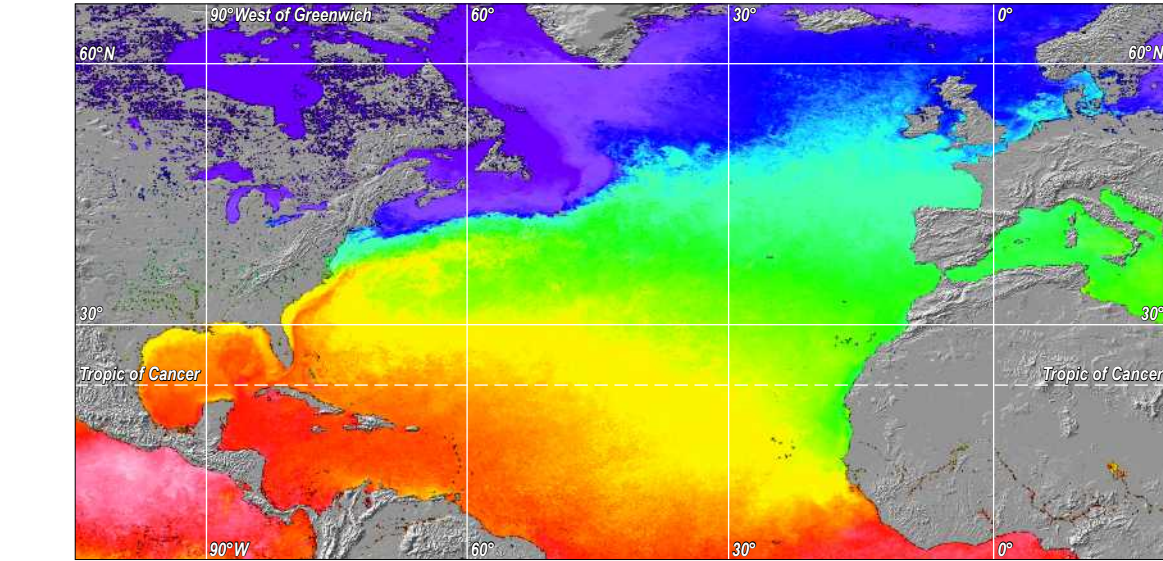


3. Sea surface temperatures of the Gulf Stream.

Temperatures in °C Months of May 2002/2003/2004 Data: NOAA

0 5 10 15 20 25 30 35

Scale on Equator 1 000 2 000km



Climatic zone (global solar irradiation)	Climatic region (thermal properties)	Water household (number of humid months)				Climatic boundaries	
		a (arid) 0-2	sa (semi-arid) 3-5	sh (semi-humid) 6-9	h (humid) 10-12		
A Tropical	1 cold tropical					Absolute Frost Line VDL 3 hrs.	
	2 warm tropical						
	3 maritime						
B Subtropical	1 high continental					C = 200% VDL 12 hrs.	
	2 continental						
	3 maritime						
C Temperate	I warm temperate					C = 100% VDL 12 hrs.	
	1 high continental						
	2 continental						
	3 maritime						
	II cool temperate						C = 200% VDL 24 hrs.
	1 high continental						
2 continental							
D Polar regions	1 high continental					C = 200% C = 100% Snow Line	
	2 continental						
	3 maritime						